

## **Lucid Dreaming**



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# **Lucid Dreaming/Induction Techniques**

This page describes a number of lucid dream induction techniques. It is recommended that you be able to recall *at least* one dream per night in order to maximize the effectiveness of these methods.

Certain elements are common to many of the lucidity-inducing techniques discussed later in this chapter. To better understand these techniques, these common components will be discussed first.

### **Sleep Interruption**

An element shared by many of the techniques is sleep interruption. Sleep interruption is the process of purposefully awakening during your normal sleep period and falling asleep a short time later (10–60 minutes). This can be easily done by using a relatively quiet alarm clock to bring you to consciousness without fully waking you. If you find yourself resetting the clock in your sleep, it can be placed on the other side of the room, forcing you to get out of bed to turn it off. Other biorhythm-based options involve drinking lots of fluid (particularly water or tea, a known diuretic) prior to sleep, forcing one to get up to urinate.

Sleep interruption is a natural part of the MILD technique (described below) which trains you to arise immediately after your dreams end.

## **Sleep Continuity**

If you have trouble initially falling asleep, avoid drinking water for about an hour before going to bed. Otherwise, you may find yourself running to the bathroom, disrupting any attempts at lucidity. Also, try to avoid caffeine and sugar before bed. However, depending on your sensitivity, caffeine may only stimulate your mind as opposed to your body. This extra grip on consciousness could be helpful in inducing lucid dreams. Exercising during the day is an excellent way of preparing your body for sleep. However, be sure to not exercise inside the three hours before bedtime, as your body will be stimulated for a short time afterwards. The morning or afternoon is the best time for this.

If you still have difficulty getting to sleep, try reading about lucid dreaming just before going to sleep. Your subconscious will likely absorb this information, increasing your chances of experiencing a lucid

dream. If you *do* decide to read before going to sleep, keep a lamp next to your bed as physically getting up to turn off the lights may reawaken your body.

## Reality checks

A reality check is a test you can perform to see if you're dreaming or awake. It might seem odd to test reality when you are sure that you're awake, but making a habit out of one or more of these reality checks will hugely increase your chances of having a lucid dream. If, say, you hold your nose and try to breathe in through it several times throughout the day then you're very likely to dream about doing it. And when you dream about performing a reality check, then of course the results should come out differently, in this case you'll find that you are somehow breathing in through your closed nostrils. You'll know that you're dreaming, and be able to take lucid control!

So here are some reality checks. You should be familiar with the entire list even if you only use a few.

		Reliability S	Speed Disc	creetness	Overal	False positives	False negatives
Breathing	Can you breathe with your fingers tightly sealing your nose and your mouth shut?	5	5	3	4.33	-	Very Rare
Jumping	When you jump, do you float back down?	5	5	1	3.67	-	Rare
Reading	Do sentences change when you read them? Read, turn away and repeat it to yourself, and then turn back and read it again. Do this twice.	5	4	4	4.33	-	Rare
Vision	Do you have perfect vision? This only works for people who have at least slightly blurry vision in the waking world. Alternatively, if you have <i>perfect</i> vision in the waking world, you may have blurred vision in the dream world.	4	5	5	4.67	-	Common
Hands	Do your hands have a strange color, too many fingers (sometimes they disappear and reappear when you try to count them!) or other abnormalities? Can you push your finger through your other hand?	4	5	5	4.67	-	Occasional
Time	Does your watch or clock tell a reasonable time? Are you even able to read the time off it? Sometimes	4	5	4	4.33	-	Occasional

	clocks have the wrong number of hands or have strange symbols. Try reading the time twice, like the Reading check above. Note: Digital clocks often work better for this reality check.						
Powers	Are you able to fly (just visualize it), unlock doors, or use other magical powers? Try to change the shape of your body, or walk through a wall, window, or mirror.	4	5	3	4	-	Common
Light switches	Does a light switch work?	4	3	1	2.67	Occasiona	l Occasional
Mirrors	Do you look normal in a mirror?	3	3	3	3	-	Occasional
Nose	Can you see your nose with one eye closed?	2	5	5	4	-	Rare
Memory	Are you able to remember how you got here, why you are here and what happened an hour ago?	2	3	5	3.33	Rare	Common
Identity	Do you have the same gender, age, job, relationships and responsibilities as usual?	2	3	5	3.33	-	Occasional

Choose a few reality checks which you will do regularly. Take them seriously, do not assume you are awake (even when you know you are). If you practice performing these checks very thoroughly while awake, then you're more likely to perform them thoroughly while dreaming. You should **always** carry out more than one reality check. If you find that it is not a dream, look around you and think of what would be different if it were a dream. If you do this it will make it more likely that you will do a reality check in a dream.

Apart from doing reality checks throughout the day, you also need to do a reality check immediately after you wake up. This helps you become lucid in false awakenings, when you dream that you have woken up but in fact are still dozing. Using a digital alarm clock or mobile phone display to do a Reading check, every single time you wake up, is a quick and reliable way to catch false awakenings.

If you have trouble bringing reality checks into your dreams then before going to bed imagine yourself in a dream, noticing odd details and doing a reality check. Then do a reality check in real life. If you do this a few times before bed you will find that you will do it more often in dreams.

If you are in a situation where you cannot do a reality check, such as at a public speaking, try to do one as soon as possible. You can do some reality checks very discreetly, such as looking at some text on a sign. If you start to say "well, I can't do a reality check now" you should not be surprised when you make this mistake in a dream!

## Which reality checks are best?

When selecting reality checks, the most important properties of a reality check are *reliability*, *speed*, and *discreetness*.

- The **reliability** of each reality check is how likely you are to recognize the dream-sign's results as showing that you are dreaming **once you do them in a dream**. It changes for each person but some reality checks are overall more accurate than others. The figures in the table above are *rough only* and differ for each person.
- It is important for a reality check to be **fast**. It wastes dream time if you have to search around for a book or (perhaps worse) a mirror. Plus, it could also give your subconsciousness more time to produce real-life results, especially if you believe that the check will give real-life results.
- Third, a reality check should be **discreet**; that is, it should not draw too much attention to you when you do it in the waking world. Suddenly jumping in the air or trying to walk through a wall as a reality check could cause much embarrassment!
- Fourth, a reality check should not have "false positives". These occur when the reality check shows you are dreaming in real life. When you get a dream result, do another reality check to be sure!
- A final important note is whether or not a reality check should have "false negatives". These occur when a reality check shows you are in real life when you are actually dreaming. If you think you may be dreaming, keep doing tests until you prove yourself right!

On the table above, these are scored out of 5.

### I have trouble remembering to do reality checks throughout the day. What reminders can I use?

You are lucky to have an interesting day and forget about lucid dreaming! You can tag your mind to remember dreaming when you think of certain things, like your friend or your homework. It isn't advisable to explicitly write "reality check" or "lucid" on your hand, as this could create an over dependence on this reminder, which may not exist in a dream. However, you might want to just draw a dot or small circle on your hand. This should be enough to remind you to do a reality check.

Try putting a little label on your clock, mobile phone, or watch, reminding yourself to do a reality check. (Some weird colors will make it more noticeable and it will take longer for you to get used to it and ignore it.) If you check these regularly during the course of your waking day, you will be doing lots of reality checks.

A simple coffee mug with a reminder such as "Are you dreaming?" printed on it or random alarms can also serve well, but try not to become too dependent on them. You can find examples of these at Byte Red.com and LD4All.com

Another technique is to write down three things you do regularly in a day. Examples include hearing your name, going through a doorway, turning on a TV, beginning to read a book, or seeing a stranger. In the morning, choose three such events and intend to do a reality check whenever they happen in the following day.

## I did a reality check in a dream but it said that I was not dreaming. What went wrong?

Some reality checks work perfectly for some people and awfully for others. These are mostly the light switches one and the hands one. If you find that the light switch works or that your hands are perfectly normal, you need to change to a different technique.

## I did a reality check in a dream but I did not quite realize I was dreaming. What went wrong?

An example of this is looking into a mirror and seeing some huge boils or a gray mist on your reflection and not realizing that you are dreaming. This is rare if you actually intended to look into the mirror as a reality check. You need to be more careful when doing your reality checks in real life or pick more reliable reality checks which show more obviously that you are dreaming. Also try to pick

reality checks that are easy to do. For example, don't rely the Time Reality Check if you never wear a watch, and don't pick the Mirror Reality Check if you rarely look in the mirror during the day or you know that you won't find a mirror in your dream.

Another good remedy for this problem (and a good practice in general) is to perform two or three reality checks at a time. The Time Reality Check, for example, can be easily combined with attempting to push one hand through another. Or, for those with glasses, testing your ability to read text fits naturally with checking for "perfect eyesight w/o glasses".

## **Techniques**

When you read through these techniques, remember that different techniques work for different people. There is no "best technique" and most techniques could be used to have 2–5 lucid dreams every night! You could have several lucid dreams in a night, but you will not know it unless you remember them!

However, you will probably want some advice as to which technique you should try first. Consider whether you want to use a method which starts from a dream or a method which starts from being awake.\* If you master a technique which starts from being awake, you will eventually be able to have lucid dreams on demand when you sleep. For other techniques, you have to rely on your luck to give you lucid dreams after you have done your technique. Here are some advantages and disadvantages for specific techniques:

(Remember, it is *essential* to be able to recall at least one dream per night before attempting these techniques)

Technique	Summary	Advantages	Disadvantages	Best for	Rating
WBTB (Wake- Back-To- Bed)	Wake after some sleep and then return to bed.	<ul> <li>Simple</li> <li>Can be very reliable, especially when used with other techniques</li> </ul>	Disrupts sleep cycle	People who want to strengthen other techniques, or who wake up in the middle of the night anyway.	Green
Auto- suggestion	Let yourself genuinely believe that you'll become lucid—without intending to become lucid—so that you really will.	• Simple	• Less effective than some other techniques (such as MILD)	People who are susceptible to hypnosis or practice meditation.	Green
MILD (Mnemonic Induction of Lucid Dreams)	Fall asleep while focused on your intention to remember that you are dreaming.	• Simple	• Can be boring	People with a good prospective memory (remembrance of future intentions).	Green

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	WILD (Wake- Initiation of Lucid Dreams)	Keep your consciousness while falling asleep and go straight into a dream.	Lets you truly induce lucid dreams at will	<ul> <li>Can cause frightening experiences</li> <li>Can take long to master</li> </ul>	People who want to reliably have lucid dreams.	Green	
	VILD (Visual Induction of Lucid Dreams)	By repetitive visualisation, incubate a dream in which you do a reality check.	<ul> <li>Also lets you induce lucid dreams at will</li> <li>Works <i>extremely</i> well for some people</li> </ul>	<ul> <li>but not very well for others</li> <li>Visualizing can keep you awake</li> </ul>	People who have good visualization skills.	Green/ yellow	
	CAT (Cycle Adjustment Technique)	Adjust your sleep cycle to encourage awareness during the latter part of your sleep.	<ul> <li>Requires relatively little effort other than adjusting your sleep cycle</li> <li>Is very effective</li> </ul>	<ul> <li>Requires you to wake up early on some days</li> <li>You are only likely to get a lucid dream on every other day (though this could easily be more frequently than with other techniques)</li> </ul>	People who have a very regular sleep cycle.	Green/ yellow	

<sup>\*</sup> The usual acronyms in forums for this are DILD (Dream-Initiated Lucid Dream) and WILD (Wake-Initiated Lucid Dream). All the techniques that induce WILDs are described under <u>WILD</u> on this page.

### **WBTB**

WBTB stands for "Wake-Back-To-Bed".

Wake yourself up after 4 to 6 hours of sleep, get out of bed and stay up for anywhere between a few minutes to an hour before going back to bed. It is preferable that you do something related to lucid dreaming during this time (such as reading about lucid dreaming), but it is not required. This is best combined with other techniques; many people have amazing results with a MILD/WBTB combination. The WBTB technique significantly increases your chances of a lucid dream, and using MILD (see below) in conjunction increases your success rate if you are planning to sleep an hour or more after your WBTB session. However, you might need plenty of sleep time and therefore you may only be able to use it on weekends.

If you are sleeping too deeply to become lucid, then you can modify this technique. Try returning to sleep somewhere different than where you usually sleep, e.g. on a couch, a different bed, or even on

the floor. If you are unable to do this, try changing the way you sleep, e.g. try sleeping with a lighter blanket or reversing the orientation of your body while in the bed (that is, swapping head and feet). Do this in order to teach your body that these different surroundings mean you want to have a more conscious sleep rather than a deeper sleep. In the beginning, different surroundings will also make you more alert, which can heighten your level of consciousness during sleep.

# I am sometimes awake for very short times, but cannot pull myself together enough to get up and out of bed. What can I do?

Put a bright piece of paper on the wall or ceiling so that you will see it when you wake up. Other stimuli could be a hot water bottle, a light turned on under your bed, or an alarm clock. A good technique is to place an alarm clock out of arm's reach so that you are compelled to physically get up from bed and turn it off. If this is still insufficient to restore consciousness, try making a note of your intentions to remain awake and place the note on your alarm clock. After you get a lucid dream with this method, you'll find it easier and easier to get out of bed because you'll have more motivation.

## **Auto-suggestion**

This technique describes how to use auto-suggestion to have lucid dreams. It can be especially effective for people who are highly susceptible to hypnosis or understand meditation, but for most people, MILD will probably be more effective.

As you are falling asleep, suggest to yourself that you will have a lucid dream either that night or in the near future. You can use a mantra (such as "I will recognize that I'm dreaming") if you want, but make sure you don't try too hard to get a lucid dream. Instead of putting intentional effort into the suggestion, try to genuinely expect to have a lucid dream. Let yourself think expectantly about the lucid dream you are about to have, but be patient if you don't get one right away.

You may also use auto-suggestion to improve dream recall. Just use the technique as described above, but instead of suggesting that you'll have a lucid dream, suggest that you'll remember your dreams when you wake up. You could also use a mantra with this, such as "When I wake up, I will remember what I dreamt". Just be careful not to put too much intentional effort into the mantra — try to genuinely expect to remember your dreams instead.

## MILD

MILD stands for "Mnemonic Induction of Lucid Dreams", or sometimes, "Mnemonically Induced Lucid Dream". The MILD technique was developed by Stephen LaBerge, and is described fully in his book *Exploring the World of Lucid Dreaming*.

With the MILD technique, as you are falling asleep, you concentrate on your intention to *remember* to recognize that you are dreaming. Repeat a short mantra in your head, such as "Next time I'm dreaming, I will remember I'm dreaming". Think about what this means (i.e., that you want to remember that you are dreaming—in the same way you might go to a grocery store and suddenly remember that you need bread), and imagine that you are back in a dream you've had recently, but this time you recognize that you are dreaming. For example, if you recently dreamed of flying, imagine realizing that it is a dream because you are flying. Keep repeating and visualizing the mantra until you are sure that your intention is set in your mind or you fall asleep. If you stop repeating and visualizing the mantra, then still try to make sure the last thing in your mind before falling asleep is your intention to remember to recognize that you are dreaming.

In general, the MILD technique can be practiced when you first go to bed at night, or after you have awakened from a dream during the night. If you practice the MILD technique after you have awakened from a dream, you should first run through the dream to ensure that you remember it. Some people find it helpful to jot down a few notes about their dream in their dream journal.

Once you have committed the dream to memory, go back to sleep and follow the steps above. But this time, visualize the dream you just had. Move through the dream in your mind until you encounter a dream-sign you originally missed. Now, instead of missing the dream-sign, imagine yourself recognizing it and becoming "lucid".

Repeat this until you have fallen asleep. You will re-enter the dream, and you will recognize the dream-sign and finally, become lucid.

### **WILD**

WILD stands for "Wake-Initiated Lucid Dream", or "Wake-Initiation of Lucid Dreams" to refer to any technique that involves falling asleep consciously. These techniques are similar to self-hypnosis. Some people believe that WILDs are not actual dreams, but are instead astral projection. Various detailed resources are available under that moniker.

For most people, they are far easier to induce in the early morning after waking up or in afternoon naps, as the sleep cycle will continue with a REM period. Once you are experienced with inducing WILDs, you can try to induce them at other times.

For WILDs to occur, it is best for your body to be completely relaxed. When you go back to bed, lie down comfortably. Now tense and relax your body, starting from your shoulders and working downwards, then back up to the face. This (or similar relaxation, meditation, or trance techniques) should make your body feel slightly heavy and relaxed.

There are many different ways to induce WILDs, but they all involve simultaneously attempting to keep the mind aware while attempting to have the body fall asleep. A few techniques are detailed below.

If you pay attention to your physical body while using these techniques, then you will likely enter sleep paralysis (which usually happens after you are already asleep) without losing conscious awareness of your body. You will get a tingling and buzzing sensation (this might be unpleasant). These sensations might be so strong that you feel that you will die (e.g., you might feel a choking sensation), but don't worry, this is perfectly safe! In fact, this process happens to you every time you sleep, you are just not conscious during it. Sometimes you can simply wait until you fall asleep straight into a lucid dream. However, if you do not fall asleep, and you become completely paralyzed (with the exception of your eyes), do not try to move. Imagine your dream hand (or spirit hand if you prefer) going up and leaving your physical hand behind. Now you should have two separate bodies, a dream one and a real one. Control your dream body only — if you control your real one, you will wake up. Now you can try to roll out of bed into your dream world (alternatively, you can get up and walk through a mirror, or sink into your bed). There is a possibility that after waking up from a dream that you initiated using this technique, you may still be paralyzed. If this phenomenon occurs, it may be accompanied by hallucinations. For example, you may wake up from a lucid dream that you started using one of the WILD techniques, and you will still be paralyzed. A dark and scary figure may approach your bed, and you are unable to move, shout, or scream. Folklores have often given a name to this phenomenon: American people call it Old Hag, Japanese people call it kanashibari, Korean people call it kawi nullida (being pressed by a pair of scissors), and in old French it was called Cauquemare, which was later transformed into the term cauchemar.

## Chakra Technique

Using Chakra ("third eye") meditation is one way to achieve WILDs. Basically, one has to focus solely on his third eye and breathing to achieve a lucid dream. This is a technique over 5000 years old, taught to Parvati by Shiva. [1] He is quoted as saying:

With intangible breath in center of forehead, as this reaches heart at the moment of sleep, have direction over dreams and over death itself.[1]

### **Eyelid Patterns**

This has been found to be very effective in many cases. However, it may lead to strange after effects, such as up to 15 dreams in one night, but otherwise, nothing harmful. This technique is as follows: When you go to sleep, ensure the room is completely dark. Then, with eyes closed, try to focus on the little dots that should appear to be moving on your eyelids. You will find that you can change their color at will. Continue focusing on these dots; make them dance around and form patterns and change colors, and eventually you should enter a Lucid Dream. This may take a little practice, but is usually very effective for summoning Lucid Dreams at will. Works better in conjunction with WBTB and other techniques mentioned above, but is still extraordinarily effective on its own.

## **Hypnagogic Imagery**

Stimulate your thinking patterns by constantly switching your attention. After doing this long enough, the images and sounds should begin to take a momentum on their own (this is called hypnagogic imagery), and may they get very strange and illogical. You should enter a dream at this point and quickly become lucid. Otherwise, you will eventually realize you have entered sleep paralysis consciously (see above). Because hypnagogic sleep paralysis involves full consciousness, dreaming can sometimes be frighteningly real. There is often a feeling of being flipped upside down, spun, or being tugged upon by an outside force. Hypnagogic hallucinations may also include strange auditory hallucinations, dark beings and flying. It is possible to observe waking reality while in a hypnagogic state, but this is limited to the sensations of your physical body. Most hypnagogic sleep paralysis states occur when sleeping face up. There is evidence that the tendency toward experiencing Hypnagogic sleep paralysis may be hereditary.

## **Counting**

Another technique is to count up to 100 in your head, optionally adding (for example) an "I'm dreaming" between each number. Alternatively, you can imagine stepping down stairs and reading each floor number, from 100 to 0. Try to make this image as vivid as possible — include not only what you see, but also what you hear, feel (touch the banister), and smell. At some point this image should continue into a dream or you will begin to get sleep paralysis as described above. It is easy to lose count, especially with counting up to 100 with an 'I'm dreaming' with each number. But stay focused: you are not going to sleep; your body is, and you must concentrate fully.

### **Sound Technique**

This method is for people, who can hear the "tinnitus". The idea is pretty much the same as the other WILD methods, which is to remain conscious while entering the dream state. In order to use this method, you must sleep in a perfectly quiet place. You need to hear the inner buzzing sound inside your ears. Lay your body down and relax as much as possible while trying to hear the sound. If you are too tired, you will fall asleep too fast and it will be difficult to remain conscious - it this case you should combine it with WBTB. By time you realize that the buzzing sound will increase in intensity. This might frighten newcomers, but be assured - nothing bad is going to happen. No, you will not be deaf when you wake up, it's perfectly safe! \*It is just an effect caused by your brain is trying to change mode, from listening to the ambient sound, to listening to the sound of dreamland, which is not real sound but just electrical charge inputed to the part of the brain to create a sensation of hearing. By that time, you will enter the hypnagogic state. All you need to do is concentrate, do not be afraid or think of anything, just be still, and in time your dream body will float, separating from your physical body, and there you go, you arrive in the dreamworld.

Note: These sounds can be heard when you concentrate, even throughout the day - when you pay attention to them, but they shouldn't be heard much aloud if you are not in silence and concentrating on it - \*as author said. The formula to hear it is quite simple: come into complete silence close your eyes and listen: is there only absolute silence or is there - something else? some...? do not create some sound just concentrate - :-) The best thing on this tech is - you can do it when you want.

### Facts to know about Tinnitus

Tinnitus is a condition termed for a hissing and whistling sound that one hears in his/her ears. It's a medical term for ringing in the ears. Several reasons lead to this irritating condition and the most common cause is the damage to the nerves located inside the ear. However, there are some other factors as well such as earwax buildup, exposure to loud noises, ear infections and certain medications. Remember, the first step in finding a natural care is to determine the actual cause of tinnitus. Some Facts about Tinnitus.

The foremost thing to remember is that ringing in the ears is a symptom and not a disease. It's normal to a certain extent, however, the condition could be an indicator of a more serious condition. It's often related with hearing loss that is caused by aging. It can be a major nuisance when the ringing becomes very loud. The condition cannot be cured permanently but certainly can be eased.

### **Some Causes of Tinnitus**

As mentioned above, ringing in the ear has some related causes and the most common out of them are damage of the cochlea due to aging (known as presbycusis), infection of the ear, exposure to loud noises and eardrum rupture. Amazingly, it has also been observed that excess ear wax buildup can also lead to this condition. Also, then there's the overuse of aspirin. Though, it's a very efficient pain reliever, its ototoxic properties (resulting into the damage to the ear) can result in tinnitus and worsen the condition in those that already have this ailment.

Tinnitus can also be developed by the usage of antibiotics, particularly amino glycoside antibiotics (a powerful form of infection fighting drug) and quinine. Also, many studies have proven the relationship between tinnitus and stress. When the brain is under stress, it has a tendency to read ordinary as well as daily sounds as fearful. After this, the tinnitus develops or becomes worse. Thus, it's very important and critical to manage stress. And if that's not enough, there are other causes for tinnitus that are not that common but are quite serious: Some of them are:

- A jaw misalignment disorder known as Temporo-Mandibular Joint (TMJ) Syndrome
- Meniere's disorder which is a disorder with recurring episodes of vertigo
- Head and neck injuries (resulting in tinnitus in one ear)
- A benign tumor known as acoustic neuroma which develops on the cranial nerve that runs from the brain to the inner ear

## **Treating Tinnitus**

Putting in some hours with a therapist can really be beneficial and in several situations it's necessary to mental success even after the condition is alleviated. It's not easy to deal with anxiety and depression and knowing how to ignore the problem appropriately rather than indulging in it can be the best solution. It's also suggested to see a psychiatrist or psychologist who are experts with the patient suffering from the condition. This can be one of the cures for tinnitus relief and getting control over your mind can build up tolerance towards this condition which can also benefit you in dealing with other problems as well.

Masking the noise in your head can also provide you with a solution when you're trying to sleep or get rid of heavy waves of noise being produced. As tinnitus can appear loud in a silent room, leaving it on

radio static can let you proper sleep. Remember, alleviating your tinnitus is only the cure for ringing in the ear as the condition can only be minimized and not completely cured.

## **Slight Physical Discomfort**

For the purpose of helping to retain your conscious awareness, slight physical discomfort is useful while performing any WILD technique. This prevents you from just drifting off to sleep. If you are lying down on your bed to do WILD and you are totally comfortable then your chances of going to sleep instead of remaining conscious are very high. The WILD technique relies on a form of deep trance induction, and many people who induce trances for other reasons rely on slight physical discomfort — for example the lotus position, or sitting in a hard-backed chair. Depending on your own preferences and your requirements of discomfort for success, you could choose from the following methods, arranged in ascending order of discomfort:

- 1. Stacking pillows so that you can sit up in bed the discomfort is caused by not being in a normal sleeping position.
- 2. Lying down on a hard floor.
- 3. Lifting your forearm vertically upwards, with the rest of your arm resting on the bed.
- 4. Sitting in a hard chair.

### **Incubating Dreams**

To incubate a dream about a specific topic, you should first think of a phrase that summarizes that topic (e.g., "I want to go to Atlantis."). It may help to write the phrase down. If there is something you want to do in the dream, think of a phrase to summarize that too (e.g., "I want to watch Atlantis sink into the ocean."). If you want to become lucid in the dream, then you should probably write something like "When I dream of [the topic], I will remember that I'm dreaming." beneath your topic phrase. Immediately go to sleep and focus on your topic phrase. Visualize yourself dreaming about the topic and (if you want to become lucid) realizing that you are dreaming. If there is something specific you want to do in the dream, visualize yourself doing it once you become lucid (not very likely to work if you don't become lucid in the dream). Think about your phrase and topic (and intention to become lucid) as you fall asleep. Make sure that the last thing in your mind before falling asleep is your intention to (lucidly) dream about the topic you want to dream about. You might want to wake yourself up when the dream starts to fade so that you remember more of the dream; you can do this by ignoring your perception of the dream environment — the opposite of dream stabilization techniques (just make sure you do a reality check when you wake up to make sure you are really awake).

## **Chaining Dreams**

Dream-chaining or "chaining dreams" is a method to re-enter your dream *after you've woken up*. It can work for lucid and non-lucid dreams, but you will probably want to enter your dream lucidly.

Once you wake up from a dream (if you don't think you were dreaming before you woke up, it may not work well) you should stay still and keep your eyes closed. Small movements are okay, but the less movement, sensory stimulation, and less time awake, the better. Ideally, it should feel less like you've woken up, and more like you've taken a 30 second break from dreaming. Once you are prepared to go back to sleep, close your eyes and either visualize yourself back in your dream, or use the "spinning technique" given in the next chapter to imagine yourself spinning back "into" your dream. Spinning is a little faster than visualization. Be sure to maintain the fact that you are dreaming (unless you don't want to be lucid), or you may lose your lucidity while falling asleep. Once in the dream, stimulate your senses as early as possible (see the next chapter).

### **VILD**

VILD stands for "Visual Induction of Lucid Dreams", or sometimes, "Visually Incubated Lucid Dream". This technique has been perfected by Peter Harrison, known as Pedro on the forums at ld4all.com. You may wish to read the main thread about the technique. The version described here has been adapted slightly.

First, make sure you are relaxed. You can use the relaxing technique mentioned in the description of the WILD technique. You can also imagine your brain emptying out and becoming sleepier. If you have a hard time falling asleep quickly, it should help to read a book (preferably about lucid dreaming) for a while before you go to sleep, until you feel very sleepy.

Now, you need to visualize a dream which you had prepared earlier. Here is an example of a prepared dream:

I am in a red room with one door. A friend next to me asks me to show them what a reality check is. I do my reality checks (which show that I am dreaming), tell them that I am dreaming, and head towards the door.

Make sure you know exactly what the dream would be like, such as which friend, the exact words they say, and which reality checks you do. Reality checks that require no props, such as books or clocks, are recommended. Visualize this dream slowly three times, to make sure that you know every detail. Then, start going full-on and visualize the dream over and over. You should visualize the dream as though you are looking through your own eyes, not from a third-person perspective. If you find your thoughts drifting, ignore them and continue to visualize the dream continuously. You will need patience for this — don't just give up if you think it won't work.

When you actually dream this, you will not notice the difference — until you do your reality checks! Continue with the dream as you incubated it (e.g., remember to thank your friend!) before continuing through the door.

### I tried to visualize the dream until I fell asleep, but I just stayed awake. What went wrong?

If visualizing keeps you awake, the VILD technique is not the technique for you! You should use a different technique.

## LILD

LILD stands for "Lucid Induction of Lucid Dreams", or sometimes, "Lucidly Induced Lucid Dream".

To use this technique, you need to have a lucid dream in the first place, but it can help you to get more later. The idea is to do something in your dream that will help you to become lucid the next time you are dreaming. For example, you could ask a dream character for help — ask them to meet you the next night and tell you that you are dreaming. If it works out the way it should, then the next time you are dreaming, the dream character will walk up to you and tell you that you are dreaming, and so you'll (hopefully) become lucid. There are many variations on this technique; you could set up signs in your dreamworld that remind you to do a reality check or eat lucid pills instead! This technique is not likely to be very effective, but it *can* work; it relies on the chance that you'll subconsciously induce the reminder (i.e., the dream character or sign or whatever you used) during some later dream, and become lucid because of it.

Note that LILD is best used in conjunction with dream-signs and auto-suggested non-lucid dreams. The basic idea as explained above is to have something in your dream that triggers the transition from normal dream state to lucid dreaming. To simply tell a character to tell you that you are dreaming the next time you fall asleep is usually not enough. There is no guarantee that you will dream about that character and there is no guarantee that your subconscious will believe the character enough to make you snap into lucidity (make you realize that you are in fact dreaming).

Now as this technique suggests, you must have some previous alternate means of having a lucid dream. Whatever technique you employ to get into this initial lucid dream state is not really important, but you should try to remember to use this technique (LILD) once you do get into a lucid dream state. Thinking of this before falling asleep (MILD) sometimes helps and usually takes many lucid dreams before finally remembering. Once you are in a lucid dream, make up a dream-sign. It can be anything. It can be an object. It can be food or a drink (that doesn't taste like anything). It is usually best to pick something that isn't quite right. Something that on the surface would appear normal in the real world, but that upon closer inspection is not quite right. Food or drinks are good as they can have no taste or not be refreshing in a dream. But try and pick something that you dream about a lot so that there is a better chance of you dreaming about this dream-sign later on. Now pick something else that only appears or happens in your lucid dream. It can be anything. If there is nothing in your current lucid dream, create something really strange. Something that could never be confused with the real world. Now mentally associate the dream-sign (food) with this unusual item or event that could never happen in the real world. But at the same time, this unusual item or event should equate to "lucid dreaming". When you see the unusual item, it should only make you think of when you have a lucid dream as this should be the only time you encountered it. So we have a 3 item associative link. Do all of the above while in a lucid dream.

The next time you dream about your dream-sign, your subconscious will think of the unusual item or event. The unusual item or event will make you think of lucid dreaming. The two combined impossibilities (1. dream-sign that cannot exist in the real world 2. item or event that only appears in lucid dreams) will make your unconscious try to make a decision on all this. This will make your conscious mind come to the surface and hopefully you will come to the conclusion that you are dreaming. Many times, you will not want to deal with it because you are too tired (that is why you are sleeping, no?) and fall back into a normal dream state. This is why it can take a few tries. Eventually, your subconscious will start putting clear signs in your dreams like billboards that spell out "YOU ARE DREAMING". But once it triggers, it is quite the realization that an instant before, you had no real control over your actions and now you can do whatever you want. Another note... if it failed, you will usually know why. So next time, you can choose another dream-sign or slightly different technique or something more shocking. Once you get this working once, it is relatively easy to use over and over as the hard part just described is over with. Sometimes disassociative techniques are needed if used too much.

To sum up, this technique is a way to force a reality check while in a normal dream state where your subconscious has no choice but to come to the conclusion that you are in fact dreaming. Once your mind knows that you are dreaming, there will be no other conclusion than your conscious mind taking over. And this is what lucid dreaming is all about.

## **CAT**

- 1. For one week, go to bed at the same time each night and get up 90 minutes earlier than you usually do. Spend those 90 minutes doing reality checks every 2–5 minutes.
- 2. Thereafter, on alternate days: follow the routine from step one, and set the intention to do your reality check routine at its regular time, while getting a full night sleep. This will cause the reality check conditioning to kick in during REM prime-time.

For detailed information on the Cycle Adjustment Technique, see the appendix on CAT : /wiki/Lucid\_Dreaming/Appendices/CAT

### **Tibetan methods**

Tibetan Buddhists practice what is known as Tibetan dream yoga. Probably the most time consuming way of inducing lucid dreams, it is also, according to the practitioners, the most rewarding. The basic practice is *awareness*. Awareness should be practiced while sleeping just as well as while being awake.

Meditating on the question "who is aware?" might catapult you into a higher degree of awareness according to Buddhist beliefs. Keeping this level of awareness is another matter. The Tibetans have developed many yogic exercises and disciplines to be practiced. Maybe the most interesting difference between Tibetan dream yoga and modern western methods of lucid dream induction is the Tibetan claim of the possibility to be aware during deep sleep, not only in the REM periods of sleep. For the reader who is interested in these methods a good start is to begin to regard all experience as a dream. After all, from the countless multitude of matter and radiation reaching our senses the nervous system tunes in only to a small fraction of this chaos. For members of the phalanx that believes we, more or less, create our own reality in the above sense this practice should feel natural. In general though, it is recommended to gain instruction from a teacher in the flesh rather than from books (like this one!).

The Tibetan Methods are not "time consuming" if the goal is to go into deeper than Lucid states. From a Raja Yoga stand point, from a Daoist standpoint, and from a Tibetan Yoga standpoint the goal is not to "play" in Lucid Dreams, but to dispel the delusional nature of what we call "reality." Also, to heal and to develop super-learning. Now "super-learning" is a relative term, it depends on your culture, modernity (in terms of entrepreneurialism - in 3rd world, 2nd world, 1st world sense; "are you developing a better rickshaw or are you developing an engine that runs off of water, what is relevant?"), and on the "energy" you find most attractive: innovative, creative, joyous, blissful, love, power, wisdom, mirth. Are you Ambitious-Worldly or Ambitious-Spiritual? All these factors play into it.

These techniques are very easy to learn and are rooted in a deeper science than the WILD, VILD, LILD -- one that does not use auto-suggestion or forced recall. In conclusion, the Tibetan methods are advanced yogic techniques that only an accomplished practitioner can fully teach. If one does not have access to a Tibetan dream yogi, one should probably concentrate on techniques that are more mundane from a Western point of view.

## Other techniques

Many of these are combinations of other techniques with some addition or modification.

- Inducing dream-signs You can become lucid by trying to induce specific dream-signs to watch for during your dream. You can use auto-suggestion (see above) to associate a specific dream-sign with doing a reality check, or you can just get used to doing a reality check whenever you encounter the dream-sign while awake. Some dream-signs you can use:
  - **Thirst** Avoid drinking for very long. Wake up later in the night and put salt on your tongue or eat chili to make you even thirstier. Fill a glass of fresh cold water and take it with you back to bed. Hopefully, you'll dream of getting something to drink. Don't use this technique if you have trouble falling asleep while thirsty.
  - False Awakening Set your intention as you fall asleep to wake up in the middle of the night. If you are a heavy sleeper, you'll hopefully dream of waking up in the middle of the night. If you are a light sleeper, you are probably more likely to really wake up.
  - Bladder Drink large amounts of water before going to sleep. You should dream of having
    to go to the bathroom. You may wet your bed! This technique should be used carefully, to
    avoid the possibility of water intoxication.
- Conditioning Strictly punish or reward yourself after a dream where you failed to realize you were dreaming or when you do have a lucid dream. This could increase motivation but not necessarily cause lucid dreams in itself. Cognitive psychology, however, states that this punishment/reward system is very counterproductive, because it ties our self-esteem to the outcome of the endeavor. The opposite of this system would be to see each attempt, including those that fail, as another step towards success.
- Muscle Exhaustion Lift slight weights with one's arms and legs for about fifteen minutes before one begins to fall asleep. One should not, however, lift anything that strains the muscles too much, for that stimulates the sympathetic nervous system and excites the body. The method

should cause a release of tension in the muscles and tire them out. This combined with relaxation techniques and any of the -ILD's should produce a positive result.

### Other methods

### Food and drink

There are various foods and drinks that you can consume which seem to have some effect on sleeping and dreaming. Note that for most of these there is no explanation or scientific study of how they work, and some may simply be placebos.

Don't go overboard with the consumption of any of these, as overdosing could have nasty effects (well, milk should be safe unless you are allergic). **Don't experiment without accumulating enough knowledge first.** The authors in no way encourage the use of legal or illegal drugs.

- The amino acid tryptophan, which can be found in warm milk amongst other sources, is a precursor for the hormone serotonin, and has been proven to help you fall asleep.
- Vitamin B6 and others of the B group are important for neuronal functions.
- Melatonin is a hormone with neuronal effects. It is produced by the pineal gland in darkness and is suppressed by blue light. Wearing blue-blocking sunglasses or avoiding bright light in general the hours before bedtime maximizes night-time melatonin secretion.
- 5-HTP or L-5-HTP is a supplement that is related to serotonin, which some claim has induced lucid dreaming on approximately half the nights it is taken.
- Caffeine is useful in WILD techniques, as it helps the mind stay focused and think vividly. Please notice that caffeine is an addictive substance and may have negative effects on your health.
- An Amino Acid Blend made up of 2000mg L-aspartic acid, 4000mg L-glutamine, and 300mg L-theanine can substantially increase your odds of having a Lucid Dream.
- Galantamine acetylcholinesterase inhibitors extract from plants such as *Lycoris radiata* (Red Spider Lily) or from chemical synthesis. Works best when taken together with choline and/or alpha-GPC.

Some people who practice Lucid dream (LD) or Out of body experience (OBE) use Galantamine to increase their odds to achieve LD or OBE. By taking small amount of Galantamine (around 4 to 8 mg) after 5 to 6 hours of deep sleep and practice the induction technique such as meditation, MILD or WILD many people report more success with Galantamine.

There also report that taking Galantamine without proper induction technique will not lead to LD or OBE but will result in only a vivid dream instead. It should also be noted that due to a long half life Galantamine will stay in the body for a period of up to and over 48 hours, as such it is advisable to space out the use of Galantamine over a period of three days so that the body does not build a resistance to the drug ruining its effectiveness.

Some people report mixing Galantamine with other Nootropic can enhance the degree of lucidity but this is still controversial since some mixtures may work for some people, but lead to failure for others.

### Plants:

- Artemisia vulgaris
- Hypericum perforatum
- Korean Ginseng
- Valeriana officinalis
- Calea zacatechichi
- Ginkgo biloba
- Nutmeg contains myristicin a deliriant.

For an in-depth guide to using supplements for lucid dreaming, see the book *Advanced Lucid Dreaming - The Power of Supplements*.

## **Drugs**

Dissociatives and hallucinogens can be used to create a (more or less) lucid dream-like state, though whether or not these help with lucid dreaming is debatable. The authors do not recommend use of these substances for induction of lucid dreams, nor do they urge the breaking of any applicable laws.

Some dissociatives and hallucinogens are:

- Amanita muscaria
- Avahuasca
- DMT Common in the shamanic method of drinking Ayahuasca, to the result of entering the spirit realm. The herbal brew contains the psychedelic DMT, a drug is actually synthesized in minute quantities by the metabolism. It may be produced during dreams, adding to the enhanced experience. [2]
- DXM
- Ketamine
- LSD
- Mescaline
- Morning glory seeds
- PCP
- Psilocybe mushrooms
- Salvia divinorum

## **Gadgets**

There are various gadgets you can use to become lucid easily. They generally detect when you are in the REM state and then provide a light and/or sound signal. This signal is supposed to be adjusted so that it doesn't wake you up but does enter your dream. The signal is then recognized as showing that you are dreaming, and you become lucid.

The most well-known device is the NovaDreamer from the Lucidity Institute. However, this product is no longer produced. Be sure to check for recommendations for devices from lucid dreaming forums.

A similar device is the DreamMaker. (http://www.wellnesstools.com/dreammaker\_quickinfo.htm). The DreamMaker works very similarly to the NovaDreamer but without the Dream Alarm feature, which worked to wake the dreamer in the middle of the REM state. This device comes with a mask, a circuit board with adjustable controls, the batteries needed to operate it, a short owner's manual, a lucid dreaming workbook, and the Stephen LaBerge book *Exploring the World of Lucid Dreaming*. The circuit board is supplied completely ready to use, but you have to insert the batteries and put the circuit board into the mask yourself.

An alternative is the Kvasar (http://brindefalk.solarbotics.net/kvasar/kvasar.html). The Kvasar costs about \$20 in raw materials, but needs to be constructed by somebody skilled in electronics as it is not sold commercially. It can also be hard to operate.

Another do-it-yourself alternative to commercial dreaming masks is Nate True's Lucid Dream Mask (http://cre.ations.net/creation/face-mounted-lucid-dreaming-mask), which does not bother with difficult-to-calibrate sensors and just uses a timer for flashing lights, and has (ostensibly) competitive results with all of the former gadgets.

### **Software**

There are many programs for your computer that can assist with lucid dreaming. These can give out verbal cues while you sleep, or assist in doing your reality checks:

- iLucid Dream for the iPhone. Dream journal, reality checks, induction techniques, binaural beats for deep sleep and much more! http://cre.ations.net/creation/face-mounted-lucid-dreaming-mask. https://itunes.apple.com/us/app/ilucid-dream/id668103961?ls=1&mt=8
- Lightened Dream is available for Windows as freeware. It can be used as a dream journal and a dream-sign list. One of its more notable features is that you can have it play a voice or song each time you enter a REM sleep period. http://lucidcode.com/LightenedDream/
- DreamDoze A web application for Social Dream interpretation and dreams journal management. http://www.dreamdoze.com
- Gnaural is a multi-platform programmable binaural-beat generator. Gnaural is released as free software under the GNU General Public License. (For a browser based demo, see Gnaural Java) http://pantheon.yale.edu/%7Ebbl2/GnauralJavaApplet\_signed.html
   .http://gnaural.sourceforge.net/
- Brainwave Generator is available for Windows. It works by playing binaural beats into your ears, changing your brainstate. http://www.bwgen.com
- Reality Check is available for Windows. It works by appearing on your computer screen at random times to remind you to do a reality check. http://bytered.com/software-realitycheck.html
- SBaGen is available for Windows, MacOS X, and Linux. It works by playing binaural beats into your ears, changing your brainstate. http://bytered.com/software-realitycheck.html
- Neuro-Programmer is available for Windows. This is powerful software that creates binaural beats and can work in conjunction with special goggles to induce certain mental states. http://www.transparentcorp.com
- LucidWeaver is available for mobile phones and PDA that support Java (J2ME). It includes a Dream alarm with sound cue which can be adjusted to a personal REM-sleep cycle for improving dream recall and lucidity training. Randomized reality tests can be set and it can be used as regular alarm clock.http://www.lucidweaver.com/
- Lucille 2.0 is an application to assist with doing reality checks. http://mythwell.com/lucille/index.html
- You Are Dreaming . http://www.sadglad.com/yad/yad.html
- Daldom a cross platform audio lucid dream induction software. http://www.sadglad.com/daldom/readme.html
- Lucid Dreaming Assistant DOS software (no home page) http://www.dreaminglife.org/downloads/lucid dreaming assistant.exe
- Unexplainable Store Lucid Dreaming Brainwave Entrainment MP3. http://www.world-of-lucid-dreaming.com/lucid-dreaming-mp3.html
- Sleep Check Reminder for Android. http://www.androlib.com/android.application.com-ropez-android-sleepcheckreminder-qDwmw.aspx
- iLucid for iOS (iPod, iPhone, iPad). https://itunes.apple.com/us/app/ilucid/id591703883?mt=8
- Sleep As Android is an Android sleep tracking app. It has a feature where it can play a sound file (by default, a soft voice that says "You're dreaming..." and echoes out) when it detects that the user is in a deep sleep. https://sites.google.com/site/sleepasandroid/

There is also a list of programs available at LD4all.com, under the "How" section.

## Hypnosis

• Remotehypnosis.com has a hypnosis mp3 that can help you achieve lucid dreams.

### **Forums**

• The World of Lucid Dreaming Forum is a good place to ask questions and receive feedback on how accurately you are performing these techniques. http://www.world-of-lucid-

dreaming.com/forum/

### References

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## **Patents**

# METHOD AND APPARATUS FOR ATTAINING LUCID DREAM STATE US2010130813

Inventor(s): DOZORTSEV DMITRI

The invention discloses an apparatus that facilitates attaining of lucid dreaming state.

0001] This application claims priority of U.S. Provisional Patent Application Ser. No. 61/117424 filed Nov. 24, 2008, which is incorporated herein by reference.

### TECHNICAL FIELD OF INVENTION

[0002] The present invention is in the field of apparatuses for modulation of sleep pattern.

### **BACKGROUND OF THE INVENTION**

[0003] It is also known that some people may experience so-called lucid dreams during REM where the person is aware that he or she is dreaming while the dream is in progress. During lucid dreams, it is possible to exert conscious control over the dream characters and environment and have them perform feats which would be physically impossible in the waking world. Lucid dreams can be extremely real and vivid depending on a person's level of self-awareness during the lucid dream.

[0004] The number of people who are naturally predisposed to lucid dreaming is small.

[0005] However, there are methods that allow a not predisposed individual to experience lucid dreaming.

[0006] For example, it is well known that during night sleep humans have several episodes of dreaming accompanied by rapid eye movements (REM).

[0007] The devices for assisting lucid dreaming usually detect REM phase by monitoring eye movement using detectors mounted within the mask and then use flashing light or sound to let person know that he is dreaming without waking him up completely.

[0008] It has also been known for a long time that most men and woman experience respectively penis or clitoris erections and changes in blood flow and heart rate during the REM phase.

### **SUMMARY OF THE INVENTION**

[0009] The disclosed invention is designed to assist an individual to enter lucid dreaming filled with sexual experience, by providing sexual stimulation when REM is detected.

## DETAILED DESCRIPTION OF THE INVENTION

[0010] The disclosed apparatus has two principal parts, one detecting sexual arousal during sleep and second that provides a sexually stimulating stimulus once such arousal is detected. Because sexual arousal during sleep coincides with dreaming phase, it becomes possible for a user to introduce a sexual connotation into the dream.

[0011] Furthermore, recognizing external sexual stimulus, exerted by the apparatus, user will become aware of being dreaming, thereby transforming normal dream into lucid with sexual content.

[0012] Alternatively, the monitoring unit of disclosed apparatus may detect dream state by other means, for example by monitoring REMs or heart rate or blood pressure, skin resistance etc and send the signal to the second unit that provides sexual stimulation.

[0013] In a more simplified form, the arousal is not being monitored or detected. Instead, sexual stimulation is applied at predetermined programmed intervals during sleep.

# Method and apparatus for electrically generating signal for inducing lucid dreaming US8267851

Inventor:

KROLL JAMES M

### BACKGROUND OF THE INVENTIONS

### 1. Technical Field

The present inventions relate to dream inducement and, more particularly, relate to a method and electrical apparatus for inducing lucid dreaming.

### 2. Description of the Related Art

A lucid dream is one in which the dreamer obtains conscious awareness while still remaining in the dream. While we are all familiar with ordinary non-lucid dreams, the notion of conscious awareness within ones dream-space is quite foreign to most. Lucid dreaming is better understood and leveraged in Eastern culture. For example, the use of lucid dreams for personal or spiritual development has been leveraged for thousands of years in Buddhist practice. In the West, most people are too busy to apply the mental training techniques required to achieve this state naturally.

Western researchers have tried to develop technological solutions in one sense or another to solve the challenge of having lucid dreams on demand. Secondary goals of such technology driven solutions have included maximizing dream vividness, recall, control or overall cognitive ability while in the dream.

The possible applications of lucid dreaming are limitless. Not surprisingly, entertainment seems to be the most common application of lucid dreaming. This might include flying like a bird, meeting up with

long lost friends or even romantic fantasies. More esoteric and well known lucid dream tasks include the elimination of recurrent nightmares, practicing physical tasks and having that practice within your dream-space impact your actual wakeful performance, elimination of phobias, insights into your subconscious by engaging in conversation with dream characters and pursuing creative endeavors such as writing music or poetry under this slightly altered state of awareness.

Given the limitless number of applications for lucid dreaming, it is desired to identify a safe and predictable method for inducing lucid dreams. While lucid dream frequency is desired, it is also important to recognize that the recovery of full cognitive ability within the dream is crucial if some of the aforementioned goals are to be implemented by the dreamer.

It is known in the art that the quality of lucid dreams can vary greatly. Perhaps the single largest challenge once lucidity is obtained is the application of full cognitive ability. Lucid dreamers will often claim they were lucid, but that their cognitive ability was a fraction of what they expect when they are awake. Ramifications of this include poor ability to remember or implement goals, or an inability to remember the details of the dream once the dreamer awakens.

An early attempt at a technological solution to lucid dreaming was the concept of a lucid dream mask by LaBerge, et al in U.S. Pat. No. 5,507,716. This was essentially a facial mask worn during a lucid dream attempt. The mask has a compartment for a printed circuit board that contains a motion detector which aligns to the position of an eye. The circuit board was designed to detect rapid eye movement (REM). Upon this detection, the mask sent light or sound cues to the dreamer. These cues may manifest in the dream as light or sound anomalies. The dreamer had to train to use these cues in order to recognize that they are dreaming. The problems with these devices were several. First, most people find it difficult to sleep with a cumbersome mask strapped to their face. Second, the settings are very tricky. A little too much motion detection sensitivity and the cues can wake the dreamer before the dream is stable. Too little and the mask doesn't detect and deliver cues. Similar problems can be said of the brightness and sound settings. The worst part is that the brain becomes accustomed to this phenomenon and tends to either tune it out or wake upon light or sound stimulus. Other peculiarities can creep in such as the lucid dreamer feeling like the mask is on them during the dream leaving them unable to see. A review of various internet lucid dream sites will find few people claiming phenomenal success with such devices.

A more recent development in lucid dream induction was that provided by LaBerge in US Patent Application Publication No. 20040266659. In this application, LaBerge identified several classes of drugs that can positively impact dream lucidity and cognitive ability of the dreamer. The main focus of this development was the class of drugs known as acetylcholine esterase inhibitors. Fundamentally, these are drugs that slow the breakdown of acetylcholine in the brain. Commercial usage of drugs such as Galantamine or Huperzine-A for lucid dream induction resulted from this disclosure by LaBerge. While this class of drugs does seem to be safe and reasonably effective at lucid dream induction, they also exhibit a number of limitations. Insomnia is a common consequence of using these drugs. Not only can this leave the subject sleepy the next day, it eliminates any possibility of lucid dreaming. Since these drugs bias acetylcholine (AcH) levels, they tend to create a chemical balance that favors REM sleep over delta wave and other physically recuperative cycles of sleep. Again, this can often leave the subject run down and sleepy the next day due to a lack of recuperative sleep the prior evening. A noticeable tolerance to acetylcholine esterase inhibitors has also been exhibited and is a common problem known to those skilled in the art. A dose that used to cause a positive effect every 4th day (generally accepted as the minimal inter-use window for galantamine), can soon only realizes a positive effect once per week. Even once a week can become a challenge for users who have leveraged a drug like galantamine for a year or more. Discussion of this tolerance issue is well documented on internet based lucid dream bulletin boards. Even with the use of these AcH boosting drugs, lucid dreamers often report unsatisfactory cognitive ability and critical thinking recovery once lucid. The last and final challenge is the gastro-intestinal distress and intolerance some people realize.

Another approach to the generalized modification of brain state activity was cranial electrical stimulation (CES). Cranial electrical stimulation was researched and developed in the Soviet Union in the 1950's. At the time this application was termed "electro-sleep" because studies focused mostly on resolution of insomnia in human subjects. By the 1960's a significant amount of private and university level research was underway in the United States for both animal and human subjects. The typical applications explored during this time were reduction of pain, anxiety, depression and elimination of insomnia.

Cranial electrical stimulation differs from several other electrical or magnetic stimuli such as transcutaneous electrical nerve stimulation (TENS) or transcranial magnetic stimulation (TMS). Cranial electrical stimulation involves the delivery of a small micro current across the brain. Typically, this is delivered via electrodes clipped to the ear lobes. The currents involved are quite small, on the order of 50 [mu]A-5 mA. Research has demonstrated that the preferred waveforms for cranial electrical stimulation applications are square or rectilinear biphasic signals with zero mean voltage delivered over time. These types of biphasic signals are easily designed and implemented to have equal positive and negative portions to eliminate the possibility of electrolysis of the blood. This positive/negative behavior of the signal better replicates the response of nerve impulses that are characterized by having one polarity upon application of pressure and a potential of equal but opposite polarity upon release of pressure. Pulse widths of 0.1 to 2.0 seconds are commonly used and the envelope of the signal typically used for traditional applications is designed to be periodic at a rate of 0.5-3.0 Hz. It is also recognized by those skilled in the art that dynamic modification of the signal is often preferred as the brain can otherwise develop a tolerance to a repetitive electrical stimulus and slowly become unresponsive to this external signal. Methods to dynamically modify the signal include but are not limited to using on/off pulses, changing the envelope frequency over time, using a low frequency envelope to modulate a higher frequency carrier wave, changing the time domain format of the periodic signal, making changes in signal magnitude, etc.

Other cited methods are different than cranial electrical stimulation. Transcutaneous electrical nerve stimulation (TENS) for example is typically applied to injured or uncomfortable muscles and/or soft tissue areas. TENS is typically delivered in the 50-200 Hz range at much higher currents. Transcranial magnetic stimulation (TMS) differs from cranial electrical stimulation in the stimulus itself. TMS is a magnetic alteration of brain response as opposed to an electrical stimulus.

While decades of research have been implemented in this area, very little has actually been quantified in terms of how cranial electrical stimulation actually works. Most data and conclusions are empirical in nature. Blind or double blind studies routinely prove that low frequency cranial electrical stimulation in the 0.5-3.0 Hz range has positive effects in the aforementioned diseases and discomforts. Certainly it is well understood via electroencephalogram (EEG) measurements of patients before and after cranial electrical stimulation treatment that cranial electrical stimulation tends to eliminate irregular or abnormal electro chemical activity especially in the alpha range of 8-12 Hz. However the precise mechanism that drives this response is poorly understood. Most research cites the generic theory that cranial electrical stimulation helps to drive neurotransmitter balance back to a normal homeostasis. Cranial electrical stimulation regiments typically follow the model of 30 minutes of treatment per day for 5-15 days. Depending on the ailment and individual, positive response is often subjectively perceived for anywhere from 1 week to 2 years.

# DIETARY SUPPLEMENT AND A METHOD TO ENHANCE SLEEP AND LUCID DREAMING US2008107754

Inventor(s): LUCIANO JEFF

A nutritional supplement for enhancing sleep and lucid dreaming in humans. It contains a combination of ingredients in proportions calculated to enhance lucid dreaming. The primary ingredients are Calea zacatechichi, L-5-Hydroxytryptophan (L-5-HTP), and Vinpocetine. In addition, the nutritional supplement may include the secondary ingredient Melatonin and the tertiary ingredients Wild Lettuce Extract, Mugwort Extract, Dimethylaminoethanol Powder (DMAE), Passionflower Extract and Green Tea Extract. Further, various Vitamins may be added such as certain B vitamins, D and C, as well as Zinc, Magnesium and Calcium. The selection and amounts of the ingredients of the nutritional supplement promotes sleep and lucid dreaming in people who have taken the nutritional supplement prior to going to sleep.

[0001] This application claims one or more inventions which were disclosed in Provisional Application No. 60/864,801, filed Nov. 8, 2006, entitled "DIETARY SUPPLEMENT TO ENHANCE LUCID DREAMING". The benefit under 35 USC [section]119(e) of the United States provisional application is hereby claimed, and the aforementioned application is hereby incorporated herein by reference.

#### FIELD OF THE INVENTION

[0002] The invention pertains to the field of dietary supplements. More particularly, the invention pertains to the use of a specific dietary supplement as a sleep aid and lucid dreaming enhancer in humans.

### BACKGROUND OF THE INVENTION

[0003] Dreams have been recognized as sacred and spiritual experiences in many cultures around the world since the beginning of recorded history and perhaps even earlier. In the last century, the understanding of dreams has changed from one related exclusively to the spiritual to that pertaining to the physical/psychological realm. Toward the end of the twentieth century, the idea of lucid dreaming, or dreaming with deliberate intention and control, has moved from the world of shamans or spiritualists to realization that lucid dreaming can be achieved by anyone with the assistance of nutritional supplements and practice.

[0004] In order to facilitate the understanding of lucid dreaming, it is important to understand some basic elements about sleep and common, or non-lucid, dreaming. Humans have little understanding of why we sleep and dream. It is known, though, that the most vivid dreams occur during that phase of a sleep cycle called Rapid Eye Movement, or REM. It is known that healthy human adults go through about 3-6 cycles during a normal night's sleep, with each cycle being about 90-120 minutes long. REM sleep is usually the last phase of each cycle. Dreams can occur during any phase of any cycle, however, it is known that those dreams that occur during REM sleep tend to be the most vivid and visual and are usually not directly related to current events from the dreamer's experiences during the prior day.

[0005] As scientists began to learn more about the function of the human brain, it was discovered that the stimuli that produce images in dreams originate in a part of the brain not associated with thinking, desires or wishes, but a more primitive area. This lead to the neurophysiological or synthesis activation theory of dreams in which dreams result from random stimuli from the brain stem. In accordance with this theory, the cognitive parts of the brain play a minimal part in dreaming, probably limited to trying to make sense out of the random images originating from the primitive region of the brain stem.

[0006] It is surmised that dreaming is important in the development of memory. Human infants spend up to 16-18 hours a day sleeping and approximately 50% of this is in REM sleep. It has been

determined that intense sessions of learning are followed by an increase in REM sleep. Dreaming also seems to play a role in emotional adjustment and in coping with traumatic experiences.

[0007] The term "Lucid Dreaming" was first used in 1913 by Fredrich van Eeden, a Dutch physician. Lucid dreaming is perhaps best defined as being aware that you are dreaming and is most likely to occur in REM sleep. Lucid dreaming can be either low level or high level. Low level lucid dreaming means that the dreamer is aware of being in a dream, but that not all the people, animals, things and scenes are constructs of his or her mind. In high level lucid dreaming, the dreamer is not only aware of being in a dream, but that all of the elements of the dream are being generated by their mind and are therefore potentially under their complete control.

[0008] According to studies done on lucid dreaming, these dreams may not only be potentially pleasurable or wish fulfilling, they can be tools for improving the quality of the dreamer's waking lives by facilitating healing, inspiring peak athletic performances, putting an end to recurrent nightmares, overcoming phobias, reducing or eliminating various anxieties and improving problem solving capabilities.

[0009] There are methods that have been developed by various researchers in the field, such as LaBerge and Rheingold. A common technique is used by the Lucidity Institute, founded by LaBerge, and is referred to as Mnemonic Induction of Lucid Dreams ("MILD"). The basics of the MILD technique involves various steps such as deliberately making yourself wake up during a dream cycle and immediately recalling the details of the dream. Over time, the dreamer is capable of recalling all of his or her dreams. The dreamer is then directed to use a "dream sign" to use as a cue to recognize that he or she is still dreaming. Becoming proficient at lucid dreaming requires a great deal of time, dedication and practice.

[0010] In order to enhance the training of a person to develop strong lucid dreaming skills, various devices have been devised. Such devices use light and/or sound to help trigger lucid dreams. Among the shamans of some primitive cultures, they would enhance their ability to have lucid dreams by using various drugs. However, as one can imagine, most of these substances are considered illegal in the U.S. Among the legal substances known to promote sleep (and possibly dreaming) are the B-vitamins, Calea zacatechichi, melatonin, mugwort and passionflower. Before using such a substance alone or in combinations, it is important to know how to use it and what side effects it might cause. There is a need, therefore, for a safe but effective nutritional supplement that helps a person go to sleep and which can enhance lucid dreaming even without extensive mental preparation or exercises.

### SUMMARY OF THE INVENTION

[0011] The present invention is a nutritional supplement that acts as a sleep aid and has been found to enhance lucid dreaming in humans. It consists of a combination of ingredients in proportions calculated to provide these results. The primary ingredients are Calea zacatechichi, L-5-Hydroxytryptophan (L-5-HTP), and Vinpocetine. A secondary ingredient is Melatonin. In addition, the nutritional supplement of the invention may include Wild Lettuce Extract, Mugwort Extract, Dimethylaminoethanol Powder (DMAE), Passionflower Extract and Green Tea Extract. Further, various B-Vitamins, vitamin D, vitamin C, magnesium, calcium, as well as Zinc, may be added.

[0012] The relative amounts of these ingredients used in the nutritional supplement will be discussed in more detail in the Detailed Description of the Invention. The use of this nutritional supplement has been seen to assist a person in going to sleep as well as helping to promote lucid dreaming in people who take the supplement prior to going to sleep.

### DETAILED DESCRIPTION OF THE INVENTION

[0013] The nutritional supplement of the invention is used as a sleep aid and a promoter of lucid dreaming in people who take it prior to going to sleep. To reiterate what was stated in the Background of the Invention, lucid dreaming is defined as being aware that the dreamer is dreaming. It is most likely to occur in REM sleep and can exist either at a low level or a high level. Low level lucid dreaming means that the dreamer is aware of being in a dream, but that not all the people, animals, things and scenes are constructs of his or her mind. In high level lucid dreaming, the dreamer is not only aware of being in a dream, but that all of the elements of the dream are being generated by their mind and are therefore potentially under their complete control.

[0014] The nutritional supplement of the invention is useful in promoting lucid dreaming in people who have not necessarily trained themselves to lucidly dream by performing extensive training techniques over a long period of time. It has been formulated to provide the best effect without the need to have undergone extensive mental conditioning, such as that taught by many organization and found in various publications, or subjecting oneself to some of the known mechanical devices invented by Laberge.

[0015] The primary ingredients are Calea zacatechichi powder, L-5 Hydroxytryptophan (L-5-HTP) and Vinpocetine. A secondary ingredient is Melatonin. Additional ingredients are Wild Lettuce Extract 4:1, Mugwort Extract 4:1, Dimethylaminoethanol Powder (DMAE), Passionflower Extract 10:1 and Green Tea Extract 10:1. Further, various vitamins may be added, such as B, C and D, as well as zinc, calcium and magnesium.

[0016] All of the ingredients of the nutritional supplement of the invention are known. For instance, Calea zacatechichi is a known dream herb, used by the Chontal natives of Mexico. Green Tea is a well known drink that is high in antioxidants. Mugwort has been used for medicinal purposes for centuries and is known to cause a dreamy state of consciousness. Passionflower (Passiflora incarnate) has mild sedative properties that may be used to treat insomnia and anxiety. Wild Lettuce is an ingredient in some sleep tonics and has been historically regarded as a mild sedative. L-5-Hydroxytryptophan is known to raise serotonin levels which, in turn, improves sleep quality. Dimethylaminoethanol is thought to increase the levels of acetylcholine (a neurotransmitter) in the brain. Vinpocetine (Vinca minor) is known to aid memory and improve mental functioning. Melatonin is a natural hormone that regulates sleep in mammals. The B Vitamins are known to regulate the body's energy processes and promote good health. Vitamin C is also a necessary ingredient in maintaining good health. Zinc is used by the body in hundreds of enzymes which regulate many of the body's functions. Vitamin D, Calcium and Magnesium are additional elements that are utilized by the body.

[0017] Relative weights for the amounts of the main ingredients of the nutritional supplement are as follows:

[0000] Weight Range Ingredient

300-600 mg Calea zacatechichi powder 30-70 mg Wild Lettuce Extract 4:1 30-70 mg Mugwort Extract 4:1 10-40 mg L-5-HTP 5-15 mg DMAE 14-30 mg Passionflower Extract 10:1 5-15 mg Green Tea Extract 10:1 1.0-4.0 mg Vinpocetine 300-600 mcg Melatonin

[0018] Additional ingredients, by weight:

[0000]

Range Ingredient

0.5-2.0 mg Vitamin B-1

5-15 mg Vitamin B-2

10-20 mg Vitamin B-3

10-20 mg Vitamin B-5

5-15 mg Vitamin B-6

100-300 mcg Vitamin B-9

50-200 mcg Vitamin B-12

5-15 mg Vitamin C

1-5 mg Zinc

20-40 mg Magnesium

50-70 mg Calcium

1-4 mcg Vitamin D

[0019] A preferred formula of the nutritional supplement by weight follows:

## [0000]

amount by weight
Primary Ingredients
Calea zacatechichi powder 500 mg
L-5-HTP 20 mg
Vinpocetine 2.5 mg

Secondary Ingredient
Melatonin 500 mcg
Tertiary Ingredients
Wild Lettuce Extract 4:1 50 mg
Mugwort Extract 4:1 50 mg
DMAE 10 mg
Passionflower Extract 10:1 22.5 mg
Green Tea Extract 10:1 10 mg

### Additional Ingredients

Vitamin B-1 1.4 mg

Vitamin B-2 10 mg

Vitamin B-3 15 mg

Vitamin B-5 15 mg

Vitamin B-6 10 mg

Vitamin B-9 200 mcg

Vitamin B-12 100 mcg

Vitamin C 10 mg

Zinc 3 mg

Vitamin D 2 mcg

Magnesium 30 mg

Calcium 60 mg

[0020] When considering lucid dreaming, one of the key elements, especially at a high level, is that the dreamer not only realizes they are in a dream but that they have the potential to control the progress and outcome of the dream. The following examples are summaries of testimonials of people who took the nutritional supplement of the invention as a sleep aid and not only were able to lucidly dream but

were able, through their heightened awareness and control, to change what had been recurrent patterns in their dreams and their lives.

### **EXAMPLES**

## Example 1

[0021] In this example, the individual kept having recurrent nightmares over a period of about 20 years. In the dream, the person would start across a bridge and be grabbed by a monster that would begin to crush him as he was being dragged under water. When he realized that he would soon drown, he would start screaming, waking not only himself but his bed partner, as well. This person started taking the nutritional supplement of the invention and, after several more dreams like this, gradually increased his awareness, or lucidity, to the point where he was able to confront the monster and eventually was able to exercise enough control over the outcome of the dream that he killed the monster. The nightmares stopped.

[0022] Apparently, the monster was a dream created manifestation of a real person that had abused him in the past. When the dreamer and the abuser faced each other in court to resolve a legal matter, he had gained the confidence to not be afraid of the abuser any more and won the case. In this instance, the nutritional supplement of the invention allowed him, through lucid dreaming, to conquer a long entrenched fear.

## Example 2

[0023] The individual in this example had been similarly experiencing recurrent nightmares since he was about 10 years old. In the nightmare, this person was chased by a dark, faceless entity and would frequently awaken screaming. However, after beginning taking the nutritional supplement of the invention, he began dreaming more and more lucidly, to the point where he soon realized that he could control his reaction to the faceless entity. He soon was able to angrily confront the entity which allowed him to rid himself of this recurrent dream. He used his experience with the recurrent nightmare that he could exercise control, through lucidly dreaming, that he could adjust his normally negative reactions to anxiety producing events in his life into positive reactions, thus enabling him to function better in the world.

[0024] Accordingly, it is to be understood that the embodiments of the invention herein described are merely illustrative of the application of the principles of the invention. Reference herein to details of the illustrated embodiments is not intended to limit the scope of the claims, which themselves recite those features regarded as essential to the invention.

# SUBSTANCES THAT ENHANCE RECALL AND LUCIDITY DURING DREAMING US2004266659

Inventor(s): LABERGE STEPHEN

### **BACKGROUND OF INVENTION**

[0001] The term "lucid dreaming" was coined by Frederik van Eeden who used the word "lucid" in the sense of mental clarity. Lucidity usually begins in the midst of a dream when the dreamer realizes that the experience is not occurring in physical reality, but is a dream. Often this realization is triggered by the dreamer noticing some impossible or unlikely occurrence in the dream, such as flying or meeting the deceased. Sometimes people become lucid without noticing any particular clue in the dream; they

just suddenly realize they are in a dream. A minority of lucid dreams (according to the research of LaBerge and colleagues, about 10 percent) are the result of returning to REM (dreaming) sleep directly from an awakening with unbroken reflective consciousness. The basic definition of lucid dreaming requires nothing more than becoming aware that you are dreaming. However, the quality of lucidity can vary greatly. When lucidity is at a high level, you are aware that everything experienced in the dream is occurring in your mind, that there is no real danger, and that you are asleep in bed and will awaken shortly. With low-level lucidity you may be aware to a certain extent that you are dreaming, perhaps enough to fly or alter what you are doing, but not enough to realize that the people are dream representations, or that you can suffer no physical damage, or that you are actually in bed.

[0002] In the circumstances described above, it is strongly desired in the art to develop a safe method of aiding dreamers attempts at more frequently achieving higher states of lucidity in their dreams. One class of preferred embodiments of this invention include neurotransmitter modulators such as Acetylcholine Esterase inhibitors.

[0003] A number of substances have been suggested to enhance the likelihood of lucid dreaming, from vitamins to prescription drugs. There are few good scientific studies to back such claims. Lucid dreaming is highly subject to the placebo effect; the belief that something will stimulate a lucid dream is very effective. Many prescription drugs as well as marijuana and alcohol alter the sleep cycle, usually by suppressing REM sleep. This leads to a phenomenon called "REM rebound," in which a person experiences intense, long REM periods after the drug has worn off. This can manifest as nightmares or, possibly, as lucid dreaming, since the brain is highly active. Drugs in the LSD family, including psilocybin and tryptamines actually stimulate REM sleep (in doses small enough to allow sleep), leading to longer REM periods. The potentially dangerous and illegal nature of these drugs is not conducive to their use as lucidity enhancers.

[0004] It is known in the scientific literature that Acetylcholine and its agonist as well as Acetylcholinesterase and its inhibitors/antagonist may be involved with REM and sleeping (Amatruda et al 1975; Baghdoyan et al 1984; Gillin et al 1985; Velazquez-Moctezuma et al 1991; Wauquier et al 1985). J. A. Hobson, on page 202 of his 1988 book, "The Dreaming Brain" states: "Cholinergic brainstem mechanisms cause REM sleep and dreaming". It has also been discovered that microinjection of the Acetylcholine agonist carbachol in the certain locations of the brain, such as the Pons, elicits extended periods of REM sleep, and that many of the neurons critical for REM sleep are responsive to Acetylcholine.

[0005] Neither Hobson, nor any other others, discuss the possibility of altering Cholinergic levels via Acetylcholine Esterase inhibitors as a means of enhancing dream recall and lucidity.

[0006] Historically, there are many cultures that have believed to have found naturally occurring substances that in some way alter dream consciousness. One such substance, Calea zacatechichi or "Dream Weed", is, according to Lilian Mayagoitia, et al, in a 1986 Journal of Ethnopharmacology article, "a plant used by the Chontal Indians of Mexico to obtain divinatory messages during dreaming." The neuro-active compounds of this herb are reported to cause thought to be sesquiterpene lactones, and as far as is currently known, unrelated to Acetylcholine Esterase inhibition or inhibitors.

[0007] Both ancient traditional medicines and modern popular speculation has assigned Oneirogenic, or "Dream-Inducing" properties to numerous herbs and other natural substances, including herbs like Valerian, Mugwort, Mullein, Kava Kava, Dittany of Crete, St. Johns Wort, Salvia Divinorum, Scutellaria Indica, Licorice Root, Vervain, Jasmine, Honeysuckle, Datura, Bee Pollen, Catnip, Hops, Sculicap, Mimosa, Lavender, Damiana, Withania Somnifera, Passionflower, Chamomile, Cardamom, Gotu Kola, Ginkgo Biloba, Ibogaine, Verbena, Rose, Cinnamon, Marigold, Nutmeg, Peppermint, Holly, Yarrow and Anise. Few if any of these have any scientific basis or support for these purported effects. Other supplements and/or drugs are also claimed to be linked to lucidity, including B-vitamins,

Melatonin, DMAE, and the psychedelic DXM. Some of these drugs and herbs may be addictive, poisonous and/or illegal.

[0008] Lotsof, in U.S. Pat. No. 4,499,096, issued Feb. 12, 1985, teaches a "Rapid method for interrupting the narcotic addiction syndrome" via the drug Ibogaine. According to the patent, this drug induces "dream enhancement or hallucinatory effect". This claimed "oneirogenic" effect is due to the fact that it induces dream behavior with the ego perspective relatively intact. This is, as the patent mentions, more of a hallucinatory effect, not a lucid dreaming effect. Because of these hallucinatory and other side effects, however, this drug is illegal in the U.S., and is thus not a desirable means for enhancing sleep dream quality. This drug is also not considered to be related to Acetylcholine Esterase inhibitors or 'smart drugs'.

[0009] DMAE (2-dimethylaminoethanol) is a chemical that has been suggested by used to treat a number of conditions affecting the brain and central nervous system. It is thought to work by increasing production of the neurotransmitter Acetylcholine, although this has not been proven. Marketed as a memory and mood enhancer, DMAE is believed to enhance intellectual functioning. There are few good clinical studies supporting this belief. Such substances are known as "cholinergics" because of the belief that they increase Acetylcholine. They have been traditionally used to treat diseases such as Alzheimer's dementia, tardive dyskinesia, and Huntington's chorea. Because DMAE is believed to be a cholinergic, it has been suggested for these disorders, even though placebocontrolled studies have provided essentially negative results. There is continued controversy over whether DMAE actually increases Acetylcholine. Nonetheless, Sergio, W. Claims in the 1988 August edition of Medical Hypotheses, in the article: "Use of DMAE (2-dimethylaminoethanol) in the induction of lucid dreams", subjective experiences of himself and his wife experiencing enhanced lucidity through use of this supplement. It is unclear from the article to what extent his purported results derive from placebo response or any specific or cholinergic effect.

[0010] Also well known in the art is U.S. Pat. No. 5,507,716, awarded to LaBerge, et al. on Apr. 16, 1996, for Equipment and methods used to induce lucid dreams in sleeping persons. In this patent, a device was employed to assist people to achieve lucid dreams via the detecting and monitoring the eye and head movements of sleeping persons, where eye movement activity in the absence of head movement is used to indicate the presence of REM sleep. By then applying sensory stimuli to sleepers in REM sleep can cue them that they are dreaming without producing awakening. Other persons have developed equipment, such as Keith M. T. Hearne who illustrated and described his respiratory measuring device in his 1983 U.S. Pat. No. 4,420,001. His device sensed temperature changes of a person's respiration in his or her breathing passageway, or in airflows to and from his or her breathing passageway. Thermistors were used, in an electrical circuit, to sense the temperature changes of the person's respiration. When the rate of these temperature changes reached a high predetermined level, the signals created in the electrical circuit initiated an audible sound, either to help arouse a sleeping person from an unpleasant dream by awaking them or to help them enter into a lucid dream state.

[0011] None of the preceding references disclosed describe a method of enhancing lucid dreaming comprising administering to individuals the Acetylcholine Esterase inhibitor class of drugs. Use of therapeutic agents for Alzheimer"s Disease such as Donepizil (AriceptÂ(R)), Rivastigmin (ExelonÂ(R)), Galantamine (ReminylÂ(R), NivalinÂ(R)), Tacrine and Huperzine leads to low incidence of adverse events, such as insomnia and gastrointestinal symptoms, while significantly enhancing dreaming cognitive clarity, lucidity, self-reflection, recall, control, bizarreness, and visual vividness.

### SUMMARY OF INVENTION

[0012] This invention relates to the field of Lucid Dreaming and the enhancement of dream recall and dream lucidity through memory enhancing drugs, including the class of substances that comprise

Acetylcholine Esterase inhibitors (AChEls). Lucid dreaming involves dreaming while knowing that you are dreaming. AChE inhibitors (AchEl's) inhibit the normal metabolic inactivation of Acetylcholine (ACh) by inhibiting the enzyme, Acetylcholine Esterase (AChE), leading to accumulation of Ach. AchEl's are most commonly used to enhance memory, particularly in patients suffering from Alzheimer's disease. Ach is also well known to be important in REM and thus is suggested herein to enhance dreaming and lucidity.

## **DETAILED DESCRIPTION**

[0013] While investigating the efficacy of donepizil (AriceptÂ(R)) as a means to enhance lucid dreaming and cognitive clarity during REM sleep in normal subjects, the following experiment was performed with the following results: A randomized, double blind, placebo-controlled crossover trial was performed with ten normal volunteers self-selected for high dream recall and interest in lucid dreaming (7 male, 3 female, age 22-55). Subjects collected dream content and other self-report measures on three nights, separated by a washout period of at least one week. At bedtime, they took capsules containing 0 (placebo), 5, or 10 mg of donepizil, with counter-balanced order of the three dosages. After each spontaneous awakening during the three nights, Ss evaluated dream content on a range of measures including bizarreness, complexity, and intensity, affect, cognitive clarity, lucidity, and control. They also estimated sleep quality, insomnia, and degree of any adverse effects.

[0014] RESULTS: Nine of the 10 Ss (90%) reported one or more lucid dreams on the experimental nights, with only one S reporting a lucid dream on a placebo night. Cognitive clarity, lucidity, recall, control, bizarreness, and visual vividness were all significantly elevated with donepizil compared to placebo. The effects were generally dose-related with 10 mg donepizil producing significantly higher levels of these variables than the 5 mg dose, which in turn produced significant elevations compared to placebo. Odds of lucid dreaming for the three conditions increased from 0.031 for placebo, to 0.429 for 5 mg donepizil, and 0.754 for 10 mg donepizil. The lucidity odds ratio for the 10 mg dose compared to placebo was 24.3 (p<0.001). Donepizil was also associated with a significantly elevated frequency of sleep paralysis and a 40% increase in estimated time awake during the night (176 vs. 126 min of a 9.0 hr night, p<0.05). The incidence of adverse events, notably mild insomnia and gastrointestinal symptoms, was low and primarily associated with the higher dose condition (with two subjects reporting nausea and one vomiting).

[0015] Thus, compared to placebo, both 5 and 10 mg dosages of donepizil significantly enhance self-reported cognitive clarity, self-reflection, and lucidity during dreaming. These effects may be further enhanced by combination of the acetylcholinesterase inhibitors with Acetylcholine precursors, agonists and/or lucidity inducing electronic devices.

[0016] In addition to donepizil data, we have data on ExelonÂ(R) (rivastigmin; 6-12 mg dose) and galantamine (ReminylÂ(R), NivalinÂ(R)8-16 mg) as well. Both work as well as AriceptÂ(R)), but with perhaps fewer side effects. We have also tested huperzine with promising results, but haven't yet worked out the dose correspondence with AriceptÂ(R) (but 5 mg Donepizil is more potent than 150 Apg huperzine).

[0017] In addition, we have reports of success with nicotine patches. There is also in the scientific literature studies showing triggering/intensification of REM sleep with arecoline. How much evidence do we need for these general claims: It should be noted that the REM altering, lucidity enhancing effects may be caused by a number of neurophysiological effects induced by these "smart drugs" besides Acetylcholinesterase inhibition. These include: 1. Using a cholinergic agonist (e.g., nicotine).

[0018] 2. Using muscarinic receptor agonist: Drugs that mimic the effect of ACh on muscarinic receptors: Inc: muscarinic (M1), M2 and nicotinic Agonists. (Such as arecoline or Recoline, a muscarinic receptor agonist)3. Using an antagonist of presynaptic receptors to activate the remaining

Acetylcholine neurons. (i.e. In rats, antisense oligonucleotide sequences that block Muscarinic M2 (but not M4) receptors increases extracellular Acetylcholine. This effect (Antisense nucleotide sequences are complementary to a sequence of messenger RNA. When antisense DNA or RNA is added to a cell, it binds to a specific messenger RNA molecule and inactivates it.) 4. Using allosteric modulators (such as allosterically potentiating ligands [APLs]) of Acetylcholine and nicotinic receptors (drugs that interact with the receptor through binding sites that are distinct from those for Acetylcholine and nicotinic agonists and antagonists).

[0019] Other strategies for potentiating Acetylcholine function for dream lucidity enhancement, including the use of other classes of compound working in similar ways should be apparent to those skilled in the art from a consideration of the enclosed descriptions.

# Inducing and maintaining lucid dream state, uses stimulus response for testing state of consciousness, psychological conditioning and generating lucidity DE19920376

Inventor(s): HORNUNG HEINZ

The invention relates to a method and apparatus for achieving and maintaining a lucid dream state. The process / device offers the possibility to achieve through the use of technical means the state of lucid dreaming (lucid dream). By this is meant that the dreaming of the state in which it is located, is aware that he would say that his present experience is a dream. This finding is a "normal" dreaming inaccessible. Furthermore, it offers / her the opportunity to retain or regain this status. First, the historical development of lucid dreaming is appreciated: While in the eastern culture very early discovered and applied the possibility of lucid dream experience - for Example, in the eighth century by Tibetan Buddhists, is this phenomenon in western culture until much later - the end of the 18th Century - at the moment few people attention. 1960-1970 was only about this topic in the modern scientific research input. In recent years, a relatively large number of related publications, published in academic journals and in book form. All methods for achieving lucid dreams described in this literature is based on the following principle. By frequently as possible (ideally permanent) Check the state of consciousness in the waking state (for Example, with the questions: Am I dreaming, I wake up? etc.) is a mental conditioning can be achieved on these issues, ie a special ability to buy this in the - that this finds its way into the dream experience hope - legitimate. This approach may thus lead to the desired result, namely the clear Will the dream, if the dream I have the same questions is how confident I am that day. However, experience shows that these practices are extremely laborious, requiring a lot of time, a very large degree of discipline and lead also unfortunately only rarely successful. It should be added that experience has shown that keeping the clarity of dream is often more difficult than achieving the same. The clarity is easily lost again and then you find yourself back in the normal dream state.

For the published prior art, the following is noted: From U.S. 5,507,716, U.S. 5,551,879 and FR 2,699,412 Devices and methods are known, with the help of lucid dreaming can be caused when a sleeping person. Here, the sleeping person are given through a face mask or a kind headband stimuli that should trigger a review of the state of consciousness. These devices offer the opportunity to register eye movements and thus REM sleep phases (here are more common dreams) to detect. If there is such, optical, or acoustic signals are triggered. However, these devices affect the one hand the sleeping person in their freedom of movement in no small measure, on the other hand, and this is very much a combination with the above described procedures appears (the conditioning during the waking state) and only to a limited extent, since they are not in the normal, everyday routine can be integrated. This possibility, DE 196 47 019 (same inventor / assignee as the present invention / application). It is the closest prior art. Here, a method and an apparatus is described which / to be applied during bedtime

and waking the whole of a person. During the waking state the person (with the help of technical means, such, In the manner of a wristwatch with a vibration signal) to any selected time points (e.g. Example, using a random generator, so the user completely unexpected) External stimuli supplied. The using person checked at each stimulus their state of consciousness, ie there is a conditioning to that stimulus instead. If the person now mostly identical stimuli (which are below their awakening threshold, and are preferably added in the early morning hours because the longest and most frequent REM periods occur) during sleep is supplied, it will be on the learned on the day way (a conditioned reflex after learning theory) respond to this stimulus, namely by checking their state of consciousness, and they will then conclude with a good chance that they are dreaming must. At the times of the stimuli that are triggered in this process during sleep, the following should be noted: The charms can take place in the (general) sleep state and may not necessarily fall into a REM stage - at any time.

According to recent findings of the suppression Fund dream research is the equation of "dream sleep REM sleep equal" wrong. It is dreamed in all the other stages of sleep. If the stimuli do not fall into a dream state, the user notices nothing flat, and only the stimuli that fall into a dream state, lead to the desired effect. The proportion of time spent dreaming periods of total sleep duration is so high that even with a random choice of the timing of the stimuli fall enough stimuli to dream phases. The applicability of the first-mentioned three devices is essentially limited to the bedtime of a person and is mainly based on the scientifically validated knowledge that sleeping outside stimuli register. Since, as mentioned, a conditioning to the stimuli (light flashes, sounds) that are released from the sleep mask / the headband in the guard time hardly seems possible, the question remains on which way processes the person these charms in her dream, that is, opportunity with which these stimuli lead to a lucid dream. Significantly better chance to really achieve a lucid dream state also offers the DE 196 47 019 by the applicability of this device is extended to the whole waking state. The desired response in a dream to a stimulus (ie, checking the state of consciousness) can now be learned easily in the waking state. Based on this, the present invention seeks to provide a method and apparatus that / the shortened compared to the above methods / devices, the state of consciousness verification time and relieved and / the total increases the chance lucid dream states to reach. Furthermore, the / the present method / device to hold, or recovering the clarity in lucid dreams is to enable. This requirement of maintaining the clarity and of recovering the same is taken into account by any of the devices mentioned above. The object is achieved by a method having the features of claim 1 and by an apparatus having the features of claim 23rd Advantageous embodiments are specified in the dependent claims.

In DE 196 47 019 A method and apparatus is described in which the user's response to a single stimulus outside the review of the state of consciousness, ie, is a purely mental activity (in the waking state and during sleep). It is a simple, but fundamental difference between waking and dream states is neglected here, namely, that action leads in the waking state, as opposed to actions in the dream, to changes in the real environment. This makes the / the present method / device advantage. It / she offers the user the opportunity to advance in the specified Reizgebungsverfahren (ie, for Example, when, how and how long stimuli are given) to intervene at any time and to change it temporarily. The basic function is not affected by the surgery and will resume automatically once the operation is completed, possibly with a lag. On the one hand, a stimulus (of which the date for Was as specified by the base function) during the period in which it acts on the person changed, eg As it can be stopped by means of a special key, on the other hand can be triggered randomly at any time an extra stimulus. Trying to consciously acting to intervene in the Reizgebungsverfahren will succeed in the waking state, of course, but inevitably fail in the dream state. Thus, a situation is created which allows an immediate and clear assessment of the state in which it is located (waking state or dream state). Succeed the test of the intervention (eg Example, by stopping a currently occurring stimulus), one knows one is awake. If you fail the test, you know that you must be dreaming. The sometimes lengthy Check the currently experienced situation with the doubts and uncertainties that occur often omitted, the desired state assignment is immediately possible and absolutely clear now. Become stimuli triggered while the user is already in an at least partially lucid dream state, in this case the failure of the attempts at transforming the stimuli for strengthening, recovering and maintaining the clarity will be extremely

helpful. A common, custom steady release of the above mentioned extra stimulus in the waking state, the dream state also lead to more frequent attempts to initiate this stimulus. The inevitable failure of this option also allows an immediate and clear state assignment. This increases the chance again, using the / of the present method / device to achieve or maintain lucid dream states. Even with these extra stimuli is of course the possibility of change of stimuli, which further increases the chances of success / the method / apparatus. Very useful, the ability to trigger an extra stimulus, also for the following reason.

As already mentioned, the holding of clarity during a lucid dream is often more difficult than achieving the same. Is now in such a time of doubt and danger of losing the clarity, trying to trigger an extra stimulus, the clarity is either recovered immediately, or if, contrary to expectations should not occur alone the associated view, the feeling, the hands very helpful (when using the device in the form of a wristwatch), since according to the initially mentioned method for achieving lucid dream state is a very important method for maintaining the clarity without technical aids viewing and feeling of the hands.

This is equally well with the above-mentioned possibility of change (eg Example of stopping) of a single stimulus of importance. The / the inventive method / device offers a more substantial relief to preserve the clarity. It / she offers the possibility to follow up on every single stimulus automatically in certain, freely selectable intervals other stimuli. Thus, a single stimulus of such B. 5 to 10 sec Duration at a distance of, for As one or two minutes a further stimulus 5-10 sec Duration done, etc. Instead of a single stimulus is now seen as a consequence of stimuli (duration, for B. 5 to 10 min) cast. Here, (abandonment of a single stimulus) also such a sequence of stimuli to be completed (while awake) with the above-mentioned stop button.

As in the dream state, such a termination is not possible, such a sequence of stimuli, if the clarity threatens to be lost, be very helpful to keep or regain this.

Can reaching the clarity such a sequence of stimuli to be extremely helpful, if first stimuli should not have led to the desired effect, if such B. did not fall into a dream state, or the clarity was only partially achieved. Furthermore, such a sequence of stimuli - according to the way the individual stimulus - be triggered at an arbitrarily selectable time. This may, for As happened with a special key. Here, an arbitrary delay (for , 5 to 30 min) to the first stimulus of the sequence begins, can be specified. Pressing this hot key so leads with a time delay to a sequence of individual stimuli.

It is known that the falling-asleep, whether in the evening, with interruptions (especially in the early morning hours) or during an afternoon nap in a special degree to is to achieve a more or less direct transition from twilight in a lucid dream. Here, such a sequence of individual stimuli be with delayed onset a very big help to achieve the clarity and keep. According to one embodiment, each breaks again press this button, the currently running special sequence of stimuli, even during the lag phase, from, and will automatically reboot with the given initial conditions. This is very useful if you are not asleep during the selected time delay. The very significant advantage of this opportunity, a sequence of stimuli delayed the onset of a stimulus sequence, is that herewith - as opposed to random on the night distributed stimuli or stimulus sequences - a triggering stimuli to times when the chances of success very high are is selectively enabled. The device, as described in DE 196 47 019 can also be combined with other devices, and give due to physiological measurement data stimuli or stimulus consequences. These measurement data of the other devices may be, for Example, to rapid eye movement (REM), act REM sleep EEG, heart rate increase, etc.. Additional devices may be external or integrated in the device, for Example, as a heart rate monitor. Default settings for the device, such As stimulus duration, stimulus timings etc. can be preset, on the device itself, or for B. also be a connection to a PC with appropriately developed software to be entered or changed. For the purpose of / the method / apparatus following may be cited: First, it should be mentioned here that so far are not aware of any negative side effects of lucid dreaming. Experiencing a lucid dream is consistently (which incidentally mentioned very clearly is) very pleasant and dream about the experience, as well as in the subsequent

memory in the waking state, as experienced "mind-expanding". This alone makes the commercial utility of this device, specifically for home users, more than clear.

Furthermore, there are many possible applications in the field of epistemological research, especially of consciousness research, as well as in use in the psychotherapeutic treatment (eg Example, nightmares). Further details of the procedure, in particular for education of the stimuli, and the device, in particular for the design of the sensor and the controller, the combination possibilities of the device with other devices 196 47 019 A1, seen from DE, which is fully incorporated by reference. The encoder of the present devices has all the properties described in DE 196 47 019....

# Method of obtaining lucid dreaming condition DE19647019

Inventor(s): HORNUNG HEINZ DR

The method involves giving a number of stimuli to a person, which can be recognised through one of his senses. The person's response to the stimuli give proof of the conscious state of the person and conditions the person's response, as a conditioned reflex. When this person is in a state of sleep, the same stimuli are given to him to evoke the same responses as those which were obtained while he was awake. The response to the stimuli bring about a state of lucid dreaming in which the person knows that what he experiences is a dream.

## **DESCRIPTION DE19647019**

The invention relates to a method and apparatus for achieving a lucid dream state.

The / be presented, the novel method / device for the first time offers the opportunity through the use of technical means the state of lucid dreaming (lucid dream) reach.

By this is meant that the dreaming of the state in which it is located, is aware that he would say that his present experience is a dream.

This finding is a "normal" dreaming inaccessible.

### Historical development of lucid dreaming

While in the eastern culture very early discovered and applied the possibility of lucid dream experience - for Example, in the eighth century by Tibetan Buddhists (Gillespie, G. (1988) Lucid dreams in Tibetan Buddhism. In: JI Gackenbach and S. LaBerge (Eds.), Conscious Mind, Sleeping Brain: Perspectives on Lucid Dreaming. New York:. Plenary) - takes place this phenomenon in western culture until much later - the end of the 18th Century (LaBerge, S. (1985) Lucid Dreaming. New York: Ballantine Books. German edition: Wide awake in a dream. Munich: mvg-Verlag, 1991) at the moment few people attention. Increased interest in scientists and philosophers since the end of the 19th Century determine (Hervey de Saint-Denys, MJL (1987) Les Rèves et les Moyens de les things. Paris: Amyot. Reprinting 1964: Cercle du Livre Precieux, Paris. Übers V McCreery. Engl Edition: Dreams and How to Guide Them, Translator v. N. Fry. London: Duckworth, 1982; Myers, FWH (1887) Automatic writing - III. Proceedings of the Society for Psychical Research, 4 Part II, 209-261; Delage, Y. (1919) Le Rève. Paris: Les Presses Universitaires de France, Arnold Foster, M. (1921) Studies in Dreams. London: Allen & Unwin; Brown, AE (1936) Dreams In Which the dreamer knows he is asleep. Journal of Abnormal Psychology, 31, 59-66; Moers Messmer, H. von (1938) Dreams with the simultaneous realization of the dream state (Dreams with concurrent knowledge of the dream state). Archives of Psychology, 102, 291-318). Since 1970 this topic is in the modern scientific research input (Green, CE (1968) Lucid Dreams, London: Hamish Hamilton). In recent years, a relatively large number of related publications - in scientific journals and in book form - appeared

(range: Tholey, P. (1983) Techniques for inducing and manipulating lucid dreams. Perceptual and Motor Skills, 57, 79-90; Tholey, P. (1988) A model for lucidity Training as a Means of self-healing and psychological growth. In: Gackenbach and see LaBerge, LaBerge (1985); Brylowski A. (1986) H reflex in lucid dreams. Lucidity Letter, 5 (1), 116-118; Brylowski, A. (1990) Nightmares in crisis: clinical applications of lucid dreaming techniques. Psychiatric Journal of the University of Ottawa, 15, (2), 79-84; Gillespie (1988), and J. Gackenbach Bosveld J (1989) Control your Dreams. New York: Herper & Row. German edition: ruler of the realm of dreams. Brunswick. Aurum Verlag, 1991, Hearne, KMT (1990) The Dream Machine: Lucid Dreams and how to control Them. Wellingborough, Northamptonshire: The Aquarian Press, Green, CL and Charles McCreery (1994) Lucid Dreaming, London, Routledge. German edition: Navigate dreams consciously, Frankfurt, Wolfgang Krüger Verlag, 1996). Unfortunately, research has almost exclusively in the English language with lucid dreaming, but there are German translations of some books before that, for the German research and public Currently, however, still receive little attention.

State of "technology" to achieve the lucid dream state

The previously known and applied by few persons methods to achieve lucid dreams are all based on autosuggestion. The ability to dream lucid (clear, ie conscious) can be only one "work on themselves" are obtained in the waking state. The principle underlying all these methods is the following: By frequently as possible (ideally permanent) Check the current state of consciousness - the real experience - a day (for Example, with the following questions: Am I dreaming? I wake up? Where am I? How old am I? Is it the person with whom I speak at the moment in my current life, or was there it at an earlier time? Do I have to wonder about anything? Etc ...) to a mental conditioning to be made on these issues, ie a special ability to buy and this in the hope that this finds its way into the dream experience. This hope is justified, since it is known that recur both everyday and especially intensely felt experiences of the day as so-called day residue in dreams (Freud, S. (1925) The Interpretation of Dreams, after the issue of 1972. Frankfurt am Main: Fischer Taschenbuch Verlag, 1991; dressing and Riemann (1994) Diagnosis and treatment of sleep disorders. Stuttgart Jena: Gustav Fischer Verlag Lauer et al. (1987) Shortened REM latency: A Consequence of psychological strain. Psychophysiology 24, 262-271). This approach may thus lead to the desired result, namely the clear Will the dream, if the dream I have the same questions is how confident I am that day (detailed explanation and description of these procedures is given, for Example, Green (1994)).

These procedures are according to experience extremely laborious, requiring a lot of time, a very large degree of discipline and lead also, unfortunately, only very rarely successful. A good result means that one will reach a few times a month, the state of lucid dreaming. One author reported three lucid dreams in eight years constant effort (Myers (1887)). From U.S. 5,507,716 Devices and methods are known, with the help of lucid dreaming can be caused when a sleeping person.

Here, the sleeping person will be given a sleeping mask stimuli that should trigger a review of the state of consciousness. Such a mask affects the sleeping person in their freedom of movement in no small measure.

The role and application of / the inventive process / device Based on this, the object of the invention to provide a method and apparatus that facilitate the achievement of lucid dream states or allow much in the first place. The object is achieved by a method having the features of claim 1 and by an apparatus having the features of claim 14 Advantageous embodiments are specified in the dependent claims. The above-described "work itself" is very much facilitated by the / the inventive method / device.

Many people will this / allow s method / device to achieve lucid dreams in the first place. The / the new process / device based on principles of learning theory, it is a training for practicing a conditioned reflex (eg Textbook example of the psychology of Medinzinischen sink, H. et al (1977), Munich, Vienna, Baltimore: Urban and Schwarzenberg; psychology textbook by Zimbardo / Ruch (1978),

Berlin, Springer Verlag).

In the waking state are the using person - given stimuli whose time points for - preferably from outside As determined by a random generator. The individual charm reminds the person from their current intense state of consciousness (I watch? Am I dreaming? Etc ...) to question, ie the using person conditioned to this stimulus, in other words, it learns in the waking state to a certain stimulus with a very specific answer to respond, namely by questioning their current state of consciousness intense. This requires only a period of a few seconds. These charms are for both day, 10 to 20 times repeated during a more or less constant repetition is necessary in the methods used so far. According to scientific learning theory can be no doubt about the success of the vorzustellenden method. It may be mentioned here because of its popularity, the experiment of Pavlov.

This has the concept of classical conditioning, ie the formation of a conditioned reflex, already in 1900 set up (animal experiments).

Many subsequent studies have confirmed the validity of this learning principle for humans (Textbook of Medical Psychology, Enke, 1977; psychology textbook, Zimbardo / Ruch, 1978). The basic idea of the method / apparatus based on the fact that the learned in the waking state conditioned reflex can also cause during a dream, as the ability to react to stimuli, obtained even in the absence waking consciousness is like the dream research proves (shrub / Meier (1992) The dreams on the track. Results of experimental dream research, Bern: Verlag Hans Huber). For these reasons, there can be no doubt about the success of the vorzustellenden method.

For the purposes of / the method / apparatus does this mean the following. During sleep preferably identical outer stimuli are as given in the waking state. The intensity of the external stimuli is determined by the using person in the waking state so that these stimuli remain under their awakening threshold, but are nevertheless perceived by her in the dream state. (Ie, checking the state of consciousness, which with very good chance now leads to the conclusion that the dreamer on the basis of diverse absurdities of dream events come to the conclusion that he must be in a dream) allows the learned in the waking state response to this stimulus so the transition to the lucid dream experience. As with any technology device, and A method (for As cycling, driving a car), the handling must therefore be learned here, with the effort to keep discipline, effort and time with the / procedures / device within narrow limits. According to the current state of knowledge of research on the learning of a conditioned reflex is the first occurrence of lucid dreams after days, or later than expected a few weeks, depending on the susceptibility of using person. In the further application of the device, the user will in many cases after a certain time can (with increasing learning effect) waive the application of the waking state.

## The purpose of the apparatus

First to be on negative effects of lucid dreaming, which could possibly be feared, received here. A short-term risk factor could be seen in an impairment of the normal recovery function of sleep. Furthermore, would imagine that lucid dreaming could in the longer those for user people have a negative effect on the attitude towards daily life.

The current state of knowledge, the research provides no evidence for both fears (for detailed discussion on the subject in Green 1994). Experiencing a lucid dream is consistently experienced by lucid dreamers to be very pleasant and as for the waking experience and the dream experience as "mind-expanding". This already established the existence of a commercial utility of this / method / apparatus, since it opens up the possibility connected with very little effort, a new "dimension" of experiencing interested persons, and thus can also offer the opportunity for personal development. Moreover, great opportunities in the epistemological research and consciousness research results. Likewise, several possibilities are conceivable to incorporate lucid dreaming into the psychotherapeutic treatment of patients. So good results in the treatment of nightmares have already

shown that in patients with nightmares of unknown cause in patients with post-traumatic appearance (such Example, after an accident, rape, torture, etc.), and do not forget to children and young people who often suffer from nightmares, lucid dreaming could be a very promising treatment approach (detailed in Green 1994). But here it is again emphasized that the vorzustellende invention can be applied by anyone without risk, so it is an invention for personal use and not a medical device. Overall, let the many possibilities that could provide lucid dreaming, according to experts at the time not yet foresee...

# Equipment and methods used to induce lucid dreams in sleeping persons US5507716

Inventor(s): LABERGE STEPHEN P [US]; RICH ROBERT S [US]; WRIGHT DAVID K [US]; KOTTKE DANIEL G [US] + (LABERGE, STEPHEN P, ; RICH, ROBERT S, ; WRIGHT, DAVID K, ; KOTTKE, DANIEL

Equipment and methods employed to assist people to achieve lucid dreams (dreams in which one is aware that one is dreaming) function by detecting and monitoring the eye and head movements of sleeping persons for the presence of sufficient eye movement activity in the absence of head movement to indicate the presence of REM sleep and then applying sensory stimuli to sleepers in REM sleep, which if incorporated into their dreams, can cue them that they are dreaming without producing awakening. With this equipment and methods, people are able to have more lucid dreams than they otherwise would. A preferred embodiment includes a face mask that contains two infrared emitter-detector pairs, one for sensing eye movements and one for sensing body movements, a statetest button, and components that produce low intensity sensory stimuli such as light and sound. A microprocessor monitors the fluctuating voltage from the infrared pairs for the occurrence of a predetermined sequence of voltages, adjustable in software, and when the correct sequence occurs, triggers the stimuli-producing components in the mask into activity, to cue the sleeper to become lucid. The methods include many procedures and adjustable parameters for optimizing the timing of the application of the sensory cues to the sleeper. Among these procedures and parameters are those used to locate the time in the sleeper's REM periods when the cue will be most effective, and those used to apply the sensory stimuli at these optimal times.

### **BACKGROUND**

As set forth in the book entitled Exploring the World of Lucid Dreaming, written by Stephen LaBerge and Howard Rheingold, the idea of cultivating a state of mind while awake for the purpose of carrying it into a dream state as a means of inducing lucid dreams, has been used by Tibetan Buddhists for more than a thousand years. However as recently as the late 1970's, experts were convinced that dreaming with consciousness that you were dreaming was a contradiction in terms and therefore impossible. At this recent time Stephen LaBerge began his Ph.D. studies of lucid dreams at Stanford University to establish proof that lucid dreaming was real, by obtaining evidence from the dream world that a person knew he or she was dreaming during sleep.

During his studies, he, with the assistance of other persons, has developed experimental testing equipment for helping him and other persons to obtain such evidence from the dream world. In so doing, the developed experimental testing equipment, in many embodiments, has also been designed and built to help persons who are lucid dreamers, or wish to try to become lucid dreamers, to have lucid dreams and to have them more often and to have them more effectively. These lucid dreamers are referred to as being Oneironauts.

Also other persons have developed equipment, such as Keith M. T. Hearne who illustrated and

described his respiratory measuring device in his U.S. Pat. No. 4,420,001 of 1983. His device sensed temperature changes of a person's respiration in his or her breathing passageway, or in airflows to and from his or her breathing passageway. Thermistors were used, in an electrical circuit, to sense the temperature changes of the person's respiration. When the rate of these temperature changes reached a high predetermined level, the signals created in the electrical circuit initiated an audible sound, either to help arouse a sleeping person from an unpleasant dream by awaking them or to help them enter into a lucid dream state.

At this time, a number of different techniques have been used to monitor sleep, in both the quiet phase and active phase, the latter also being called the rapid eye movement phase of sleep and referred to as REM sleep. These techniques include applications of: electrodes for EEG, ECG and EMG; infra-red sensing; and respiration measurement with strain-gauges or thermistors. Among these techniques, Stephen LaBerge and those helping him sought a method to reliably sense the presence of REM sleep, so that a device could automatically signal to a sleeper that he or she is dreaming. The requirements for such a device were portability, ease of use, low cost, and above all reliability and the successful induction of lucid dreams, which are those dreams wherein one is aware that one is dreaming.

### **SUMMARY**

Stephen LaBerge and those helping him created better methods to help persons lucidly dream, and, in so doing, he and those helping him developed various embodiments of experimental test equipment that is used to make sleeping persons aware they are in the active phase of their sleep, and they are having a dream, while they still continue to dream or become lucid, and such equipment senses eye movements. They selected sensing movements of a person's eyes, via movement of his or her eyelids, because by using eye movement sensing, especially when combined with body movement sensing, and thereafter accounting for such body movements, to thereby ascertain accurately eye movements, per se, they developed very reliable test equipment for detecting the phases of sleep, and especially the active phase of sleep, called the rapid eye movement phase, which is further conveniently referred to as being REM sleep.

Their development of their methods and the experimental test equipment centering on eye movement sensing, undertaken by sensing eyelid movements, which so indicate eye movements, extended over a considerable period of time. Now equipment is soon to be made available for many persons to use in practicing their methods. In respect to a preferred embodiment of the equipment each person, during his or her sleep, is provided with a comfortably worn face mask covering face portions, and a headband supports the face mask about the person's head. The face mask, in turn, supports components of this equipment, which sense a person's eyelid movements during sleep, and which, then at the proper time, signals the person that he or she is dreaming, and thus should be able to be lucidly dreaming. The signal, preferably a light signal, occurs without awaking the person. Also a sound signal is selectively and optionally used.

The sensing components supported on the face mask utilize a low level infrared emitter positioned on the face mask to direct infrared light to the eyelid of a sleeping person, and a low level infrared detector to receive the reflections of this infrared light from the surface of this eyelid of this sleeping person. The signalling components supported on the face mask preferably utilize small flashable lights and/or small speakers to signal the sleeping person that he or she is dreaming, and thus should be able to be lucidly dreaming, without awaking the person.

A like arrangement of a low level infrared emitter, also positioned and supported on the face mask, but over a part of a person's face, which does not necessarily move with a person's eyelids, is also used with a low level infrared detector also positioned and supported on the mask, to detect face, head, or body movements, which are independent of a person's eyelid movements. These body movements are accounted for to avoid erroneous conclusions as to the eyelid movements, per se, and thereby to

accurately determine whether or not a person is dreaming, or could be lucidly dreaming.

The other components of this preferred embodiment of the equipment are arranged together as a shelf or table supported subassembly, with circuitry extending to the sensing and signalling components supported and positioned on the face mask, These other components include: analog signal conditioning group of components, in turn including alternating current coupling, a preamplifier, a low pass filter, a computer gain setting unit, and an integrating unit to receive signals from the infrared detector detecting eyelid movements; an analog-digital converter for converting the analog signals of the eyelid movements into digital signals; analog signal conditioning group of components, in turn including an alternating current coupling, a preamplifier, a low pass filter, a computer gain setting unit, and an integrating unit to receive signals from another infrared detector, detecting face, head, and/or body movements; an analog-digital converter for converting the analog signals of the face, head, and/or body movements into digital signals; a computer to receive the digital signal information from both the analog-digital converters, to receive signals via software instructions, to direct data to data storage, to direct signals to activate sensing lights, and to activate sensing speaker sounds...

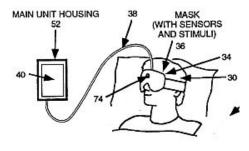


FIG. 1

# LUCID DREAM STIMULATOR, SYSTEMS, AND RELATED METHODS US2017304583

A dream stimulator may include a substrate and a plurality of electrodes positioned along a first side of the substrate. The stimulator also may include a stimulator coupled to the substrate. At least one lead may couple the plurality of electrodes to the stimulator. Additionally, a band may be positioned along a second side of the substrate and about each of the plurality of electrodes.

# SYSTEMS AND METHODS FOR DELIVERING SENSORY INPUT DURING A DREAM STATE US9620027

Embodiments of the invention provide apparatus, systems and methods for detecting neurological activity indicative of a dream state of a human. Many embodiments of the invention provide apparatus, systems and methods for detecting neurological activity of a human indicative of a dream state or the onset thereof and delivering an input to the user (such as an audio or other sensory input) during the dream state. Particular embodiments of the invention provide systems and methods for detecting neurological activity indicative of the onset or occurrence of a dream state of a human and delivering an audio or other sensory input during the user's dream state. The audio input may be used for learning, delivering messages to the user's subconscious, and/or promoting a state of relaxation.

# EROTIC DREAM INDUCTION APPARATUS US2016331924

An erotic dream induction apparatus includes an inflatable air bladder, such as a rubber balloon, to induce sexual arousal via genital stimulation. The air bladder is brought into contact with either the penis or vagina of the user, and/or is inserted into the anus and/or vagina of the user. In one embodiment, the air bladder is brought into contact with the penis, vagina, and/or anus of the user by being maintained in position near, against, or around the penis, vagina, and/or anus by means of straps or pockets in stimulation underwear, such that when the air bladder is inflated, the air bladder makes contact with at least a portion of the penis, vagina, and/or anus of the user. The air bladder is repeatedly inflated and deflated by means of pumps and/or valves.

# Dream Enhancement Apparatus and Method US2016310698

Dream stage enhancement uses a headband with EEG-EOG sensors, onboard processors, memory, coarse and fine time REM waveform detection modules, LEDs and an audio playback unit. After normalization to the user's EEG waveforms, the user's EEG-EOG signals are processed, REM and NREM stages detected and light, sound or AV stimuli are presented to the user based upon user-supplied light-sound-AV stimuli commands. To provide a reality check control ("RCC"), the head unit has a user actuatable RC interface whereby during sleep, RC stimuli are presented when the user depresses the RCC control which plays back the user supplied stimulus. In a "learning mode," the user selects "Recall" or "No Recall" ("NR") after the sleep period. If NR, then the system changes the color of light stimuli, light intensity, flash, audio sound type, audio intensity, and AV. If "Recall" the user supplied stimuli commands are carried out.

# INDUCING LUCID DREAMING WO2016209078

The present invention is in the field of induction of lucid dreams by Transcranial Alternating Current Stimulation (TACS). Lucid dreaming refers to a well-documented and scientifically accepted phenomenon that may occur during natural sleep. Lucid dreaming is characterized by awareness of the fact that one is dreaming, an increased chance of control over the events that are occurring within the dream and increased logical or rational thought during the dream.

# Drug containing melatonin and phosphatidylserine CN105708843

The invention discloses a drug containing melatonin and phosphatidylserine. The drug comprises raw materials in parts by weight as follows: 0.1-100 parts of the melatonin and 1-400 parts of phosphatidylserine. A drug preparation can be beverage, tea, tablets, granules or capsules. The drug maintains the effects of aging resistance, mental state maintenance, sleep improvement, resistance enhancement and human immune system support of the melatonin, and can treat symptoms of deficiency type dyspnea caused by long-time cough, wet dream and night emission, enuresis and frequent micturition, protracted diarrhea, spontaneous sweating, night sweat, body fluid deficiency, thirst, short breath and feeble pulse, diabetes caused by internal heat, palpitation and insomnia and the like, and due to addition of phosphatidylserine, the drug further can enhance the memory ability, prevent senile dementia, improve intelligence and the like.

# Traditional Chinese medicine used for treating sexual intercourse in dream CN104189132

The invention provides a traditional Chinese medicine used for treating sexual intercourse in dream. The traditional Chinese medicine is prepared from the following medicines: radix astragali, radix codonopsis, Chinese angelica, atractylodes macrocephala, longan, spina date seed, poria with hostwood, milkwort root, cassia twig, fossil fragments, oysters, radix glycyrrhizae preparata, Chinese dates and tuber fleeceflower stem. 700ml of water is added to first dose of the medicines to decoct the medicines until the decoction is 200ml, and 500ml of water is added to second dose of the medicines to decoct the medicines until the decoction is 200ml. The traditional Chinese medicine is taken twice a day on an empty stomach, once in the morning and once in the evening.

# Non-Contact Electronic Tool for Dream Enhancement US2013012762

This invention pertains to a non-contact electronic device for the enhancement of dreaming. By enhancement it is meant increasing the frequency, the length, the lucidity, and the color of dreaming. For example, one person who dreams in grey shades now dreams in color when using the device. The device will also allow better recall of the dreams. Dream enhancement is generally a pleasant process and promotes a pleasant feeling in the morning after use. The device is a passive electronic device, that is, it is not actively powered. The user places the device a few feet away during sleep. The device uses a piezo-crystal and an iron core. It is believed that ambient fluctuations in the piezo-crystal's voltage produce an influence field that is broadcasted through the iron core to the user a few feet away.

# Method and apparatus for electrically generating signal for inducing lucid dreaming US8267851

A lucid dream is induced in a subject. A brain state entrainment signal is generated in a circuit. A transducer applies a waveform of a kind sufficient to cause a lucid dream in the brain based on the brain state entrainment signal. The brain state entrainment signal modulates a carrier wave of a higher frequency than the entrainment frequency. The waveform is first applied to the subject and thereafter removed to attempt a lucid dream. The waveform can be electrical, light, sound or magnetic waveforms.

# LUCID DREAM STIMULATOR, SYSTEMS, AND RELATED METHODS US2017304583

A dream stimulator may include a substrate and a plurality of electrodes positioned along a first side of the substrate. The stimulator also may include a stimulator coupled to the substrate. At least one lead may couple the plurality of electrodes to the stimulator. Additionally, a band may be positioned along a second side of the substrate and about each of the plurality of electrodes.

# SYSTEMS AND METHODS FOR DELIVERING SENSORY INPUT DURING A DREAM STATE US9620027

Embodiments of the invention provide apparatus, systems and methods for detecting neurological activity indicative of a

dream state of a human. Many embodiments of the invention provide apparatus, systems and methods for detecting neurological activity of a human indicative of a dream state or the onset thereof and delivering an input to the user (such as an audio or other sensory input) during the dream state. Particular embodiments of the invention provide systems and methods for detecting neurological activity indicative of the onset or occurrence of a dream state of a human and delivering an audio or other sensory input during the user's dream state. The audio input may be used for learning, delivering messages to the user's subconscious, and/or promoting a state of relaxation.

# EROTIC DREAM INDUCTION APPARATUS US2016331924

An erotic dream induction apparatus includes an inflatable air bladder, such as a rubber balloon, to induce sexual arousal via genital stimulation. The air bladder is brought into contact with either the penis or vagina of the user, and/or is inserted into the anus and/or vagina of the user. In one embodiment, the air bladder is brought into contact with the penis, vagina, and/or anus of the user by being maintained in position near, against, or around the penis, vagina, and/or anus by means of straps or pockets in stimulation underwear, such that when the air bladder is inflated, the air bladder makes contact with at least a portion of the penis, vagina, and/or anus of the user. The air bladder is repeatedly inflated and deflated by means of pumps and/or valves.

# Dream Enhancement Apparatus and Method US2016310698

Dream stage enhancement uses a headband with EEG-EOG sensors, onboard processors, memory, coarse and fine time REM waveform detection modules, LEDs and an audio playback unit. After normalization to the user's EEG waveforms, the user's EEG-EOG signals are processed, REM and NREM stages detected and light, sound or AV stimuli are presented to the user based upon user-supplied light-sound-AV stimuli commands. To provide a reality check control ("RCC"), the head unit has a user actuatable RC interface whereby during sleep, RC stimuli are presented when the user depresses the RCC control which plays back the user supplied stimulus. In a "learning mode," the user selects "Recall" or "No Recall" ("NR") after the sleep period. If NR, then the system changes the color of light stimuli, light intensity, flash, audio sound type, audio intensity, and AV. If "Recall" the user supplied stimuli commands are carried out.

# INDUCING LUCID DREAMING WO2016209078

The present invention is in the field of induction of lucid dreams by Transcranial Alternating Current Stimulation (TACS). Lucid dreaming refers to a well-documented and scientifically accepted phenomenon that may occur during natural sleep. Lucid dreaming is characterized by awareness of the fact that one is dreaming, an increased chance of control over the events that are occurring within the dream and increased logical or rational thought during the dream.

# Drug containing melatonin and phosphatidylserine CN105708843

The invention discloses a drug containing melatonin and phosphatidylserine. The drug comprises raw materials in parts by weight as follows: 0.1-100 parts of the melatonin and 1-400 parts of phosphatidylserine. A drug preparation can be beverage, tea, tablets, granules or capsules. The drug maintains the effects of aging resistance, mental state maintenance, sleep improvement, resistance enhancement and human immune system support of the melatonin, and can treat symptoms of deficiency type dyspnea caused by long-time cough, wet dream and night emission, enuresis and frequent micturition, protracted diarrhea, spontaneous sweating, night sweat, body fluid deficiency, thirst, short breath and feeble pulse, diabetes caused by internal heat, palpitation and insomnia and the like, and due to addition of phosphatidylserine, the drug further can enhance the memory ability, prevent senile dementia, improve intelligence and the like.

# Traditional Chinese medicine used for treating sexual intercourse in dream CN104189132

The invention provides a traditional Chinese medicine used for treating sexual intercourse in dream. The traditional Chinese medicine is prepared from the following medicines: radix astragali, radix codonopsis, Chinese angelica, atractylodes macrocephala, longan, spina date seed, poria with hostwood, milkwort root, cassia twig, fossil fragments, oysters, radix glycyrrhizae preparata, Chinese dates and tuber fleeceflower stem. 700ml of water is added to first dose of the medicines to decoct the medicines until the decoction is 200ml, and 500ml of water is added to second dose of the medicines to decoct the medicines until the decoction is 200ml. The traditional Chinese medicine is taken twice a day on an empty stomach, once in the morning and once in the evening.

# Non-Contact Electronic Tool for Dream Enhancement US2013012762

This invention pertains to a non-contact electronic device for the enhancement of dreaming. By enhancement it is meant increasing the frequency, the length, the lucidity, and the color of dreaming. For example, one person who dreams in grey shades now dreams in color when using the device. The device will also allow better recall of the dreams. Dream enhancement is generally a pleasant process and promotes a pleasant feeling in the morning after use. The device is a passive electronic device, that is, it is not actively powered. The user places the device a few feet away during sleep. The device uses a piezo-crystal and an iron core. It is believed that ambient fluctuations in the piezo-crystal's voltage produce an influence field that is broadcasted through the iron core to the user a few feet away.

# Method and apparatus for electrically generating signal for inducing lucid dreaming US8267851

A lucid dream is induced in a subject. A brain state entrainment signal is generated in a circuit. A transducer applies a waveform of a kind sufficient to cause a lucid dream in the brain based on the brain state entrainment signal. The brain state entrainment signal modulates a carrier wave of a higher frequency than the entrainment frequency. The waveform is first applied to the subject and thereafter removed to attempt a lucid dream. The waveform can be electrical, light, sound or magnetic waveforms.

### Dream generator CN202198951

The utility model relates to a dream generator, comprising a luminous source and a controller for controlling the luminous source to twinkle at intervals. The luminous source is connected on a clamp. The luminous source and the controller are supplied with electricity by a power source. The utility model provides a dream generator to generate dream for people entering into sleep.

# METHOD AND APPARATUS FOR ATTAINING LUCID DREAM STATE US2010130813

The invention discloses an apparatus that facilitates attaining of lucid dreaming state. The utility model relates to a dream generator, comprising a luminous source and a controller for controlling the luminous source to twinkle at intervals. The luminous source is connected on a clamp. The luminous source and the controller are supplied with electricity by a power source. The utility model provides a dream generator to generate dream for people entering into sleep.

# COMPOSITIONS, METHODS, AND SYSTEMS FOR RAPID INDUCTION AND MAINTENANCE OF CONTINUOUS REM SLEEP WO2009100071

Compositions, kits, methods, and systems to induce, maintain, monitor, and interpret a continuous, un-fragmented REM sleep state in humans, generate dreams, recover sleep, create brain neuronal plasticity and activate the brain for cognition enhancement and mood stabilization are described. If potentially combined with other medications, a platform is provided to develop new research and therapies in many fields treating the human brain. The procedure reliably and quickly generates a Continuous REM Sleep cycle of pre-determined time or indefinite duration depending on therapeutic goals, allowing the patient to experience a qualitatively superior dream sleep in a shortened period of time compared to a natural sleep cycle. Profuse positive (pleasant) dreams are produced as well. REM sleep, dreams and sleep recovery can be reliably generated, and various sleep, psychological and neurological illnesses and disorders can be treated or prevented either solely by this method or in combination with additional agents.



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